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Natural
Resources
Conservation
Service

In cooperation with
Minnesota Agricultural
Experiment Station and
Board of Water and Soil
Resources

Soil Survey of Waseca County, Minnesota



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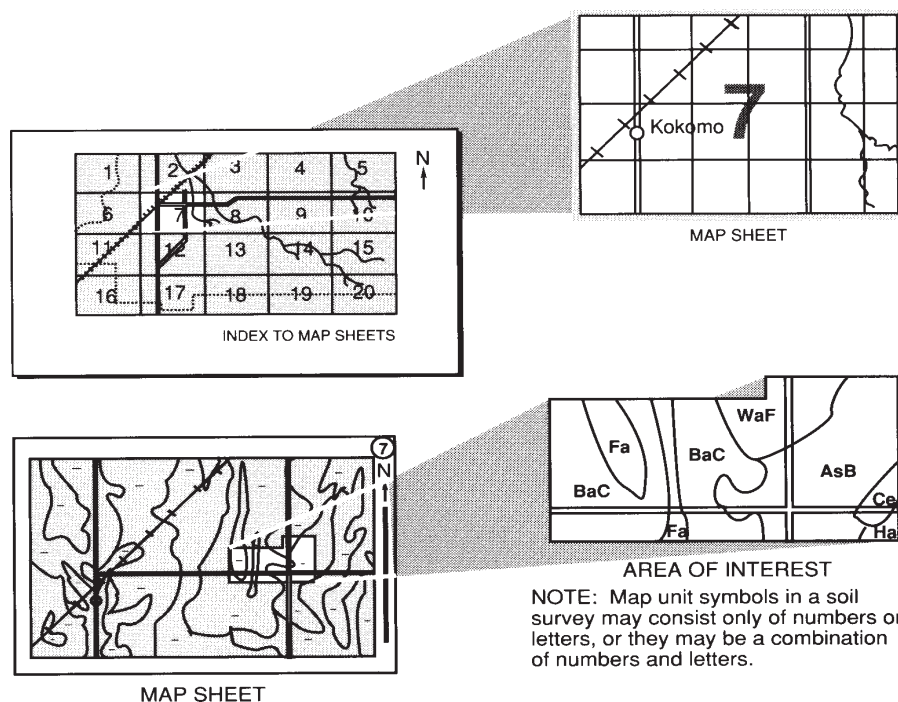
How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet, and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described. The map unit symbols and names also appear as bookmarks, which link directly to the appropriate page in the publication.

The **Contents** shows which table has data on a specific land use for each soil map unit. Also see the **Contents** for other sections of this publication that may address your specific needs.



This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey.

Major fieldwork for this soil survey was completed in 2000. Soil names and descriptions were approved in 2001. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2000. This survey was made cooperatively by the Natural Resources Conservation Service, the Minnesota Agricultural Experiment Station, and the Board of Soil and Water Resources. The survey is part of the technical assistance furnished to the Waseca County Soil and Water Conservation District. The survey was partially funded by Waseca County. Other assistance was provided by the Agricultural Extension Service, the Minnesota Geological Survey, and the Minnesota Department of Natural Resources.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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Cover: Cropland and marshes in a nearly level to steep area of Reedslake, Lester, and Le Sueur soils in Waseca County.

Additional information about the Nation's natural resources is available on the Natural Resources Conservation Service homepage on the World Wide Web. The address is <http://www.nrcs.usda.gov>.

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Where To Get Updated Information

The soil properties and interpretations included in this survey were current as of March 2003. The most current information is available through the NRCS Soil Data Mart Website at <http://soildatamart.nrcs.usda.gov/>

Additional information is available from the Natural Resources Conservation Service (NRCS) Field Office Technical Guide at Waseca, Minnesota, or online at www.nrcs.usda.gov/technical/efotg. The data in the Field Office Technical Guide are updated periodically.

Additional information about soils and about NRCS is available through the Minnesota NRCS Web page at www.mn.nrcs.usda.gov.

For further information, please contact:

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Foreword

This soil survey contains information that affects land use planning in this survey area. It contains predictions of soil behavior for selected land uses. The survey also highlights soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

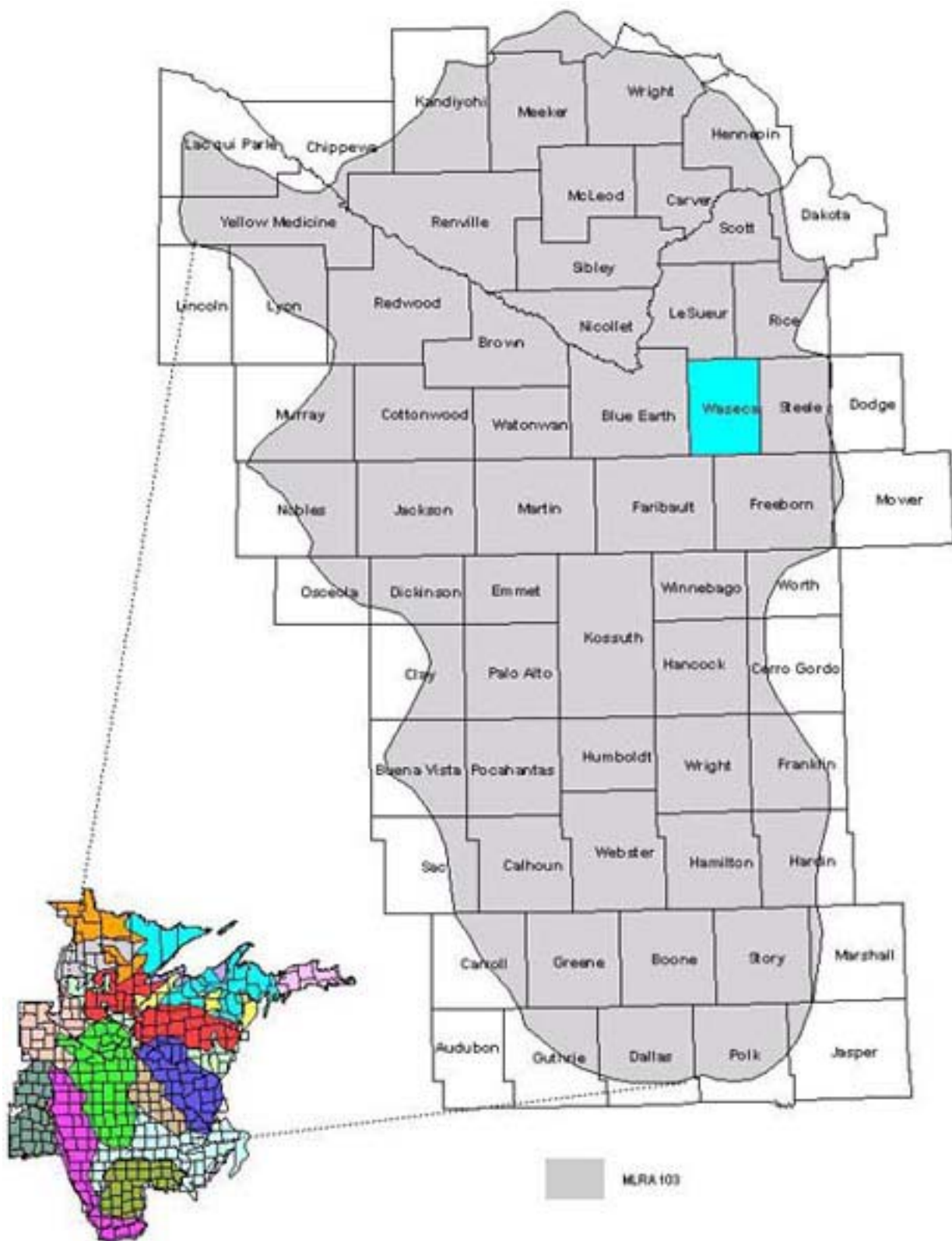
This soil survey is designed for many different users. Farmers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

William Hunt
State Conservationist
Natural Resources Conservation Service



Location of Waseca County and MLRA 103 in Region 10

Soil Survey of Waseca County, Minnesota

By Douglas E. Miller, Natural Resources Conservation Service

Fieldwork by John F. Beck, April L. Gansen, Peter R. Hartman, Thomas C. Jackson, Kenneth D. Matzdorf, and Douglas E. Miller, Natural Resources Conservation Service

Correlation by Allan G. Giencke, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service,
in cooperation with the Waseca Soil and Water Conservation District and the Minnesota
Agricultural Experiment Station

How This Survey Was Made

This survey was made to provide updated information about the soils and miscellaneous areas in the survey area, which is in Region 10 and in Major Land Resource Area 103. Region 10 is an administrative division of the Natural Resources Conservation Service. Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation and topography, climate, water, soils, and vegetation (USDA, 1981). Waseca County is a subset of Major Land Resource Area 103 (Central Iowa and Minnesota Till Prairies). Map unit design and the detailed soil descriptions are based on the occurrence of each soil throughout the MLRA. In some cases a soil component may be referred to that does not occur in the Waseca County subset but that is representative of the MLRA.

The information includes a description of the soils and miscellaneous areas and their location and a discussion of their properties and the subsequent effects on suitability, limitations, and management for specified uses. Soil scientists used information from the previously published survey of Waseca County (Cummins, 1961). In the field, the soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is

the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landscape or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Interpretations are modified as necessary to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a zone in which the soil moisture status is wet within certain depths in most years, but they cannot predict that this zone will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map

unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

The descriptions, names, and delineations of the soils in this survey area may not fully agree with those in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

General Nature of the Survey Area

Waseca County is in the northwestern part of the Central Iowa and Minnesota Till Prairies (MLRA 103). The county has a total area of 277,000 acres, of which 5,067 acres consists of natural bodies of water. Waseca, the county seat, is the largest community. In 1990, Waseca had a population of 8,385 and Waseca County had a population of 18,500.

History

Waseca County was inhabited by the Winnebago band of Lakota Indians, generally known as Sioux, when the first settlers arrived. The Lakota word "Waseca" means "rich ground." The county was opened to legal settlement in 1851. In that year the Sioux relinquished title to a large area of land west of the Mississippi River.

From 1855 to 1857, the area was part of Steele County; on February 27, 1857, Waseca County was organized. Most of the early settlers who came to the county were from the eastern part of the United States and Canada. They were mainly of Irish, German, and Scandinavian descent. The town of Wilton was the original county seat, but in 1870 the county seat was moved to its present location in Waseca. Of the 13 original townships established, 7 remain. They are Waseca, Janesville, New Richland, Waldorf, Matawan, Alma City, and Otisco (Childs, 1905).

The border between two major ecological communities runs through Waseca County. The prairie grasslands and hardwood forests were native to various parts of the county; transitional areas of oak woods openings occurred between these two land types. Generally, the prairie grasslands dominated the southwestern and central parts the county. The prairie and forests included numerous lakes, streams, rivers, and marshes. The soils formed in glacial deposits that were high in natural fertility. Because of the natural fertility of the soils, farming developed and prospered in the area. In 1859, the first wheat crop was harvested. By 1886, 1,523 farms were raising wheat, oats, corn, barley, rye, potatoes, beans, hay, flax seed,

grapes, timothy seed, clover seed, and apples (Rutledge, 1988). Currently, most of the land area in the county is farmland. In 2000, approximately 84 percent of the farmland was used for crops. Corn and soybeans are the principal grain crops, and hogs, dairy cattle, and poultry are the principal livestock enterprises in the county.

Industry and Transportation Facilities

Agriculture and supporting businesses are the main industry in Waseca County. Other industries include printing, electronics, and small businesses.

Waseca is approximately 65 miles from Minneapolis and St. Paul and about 50 miles from Rochester. The county has a well developed network of roadways. U.S. Highway 14 and Minnesota Highway 30 both cross the county from east to west. Minnesota Highway 13 and Waseca County Road 3 are the main north-south routes. Other county and township roads make all areas of the county accessible. A railroad line runs east and west, intersecting the towns of Waseca and Janesville. A branch line goes south from Waseca through New Richland.

Quaternary History and Glacial Landforms of Waseca County

By Barbara A. Lusardi, geologist, Minnesota Geological Survey

During the Pleistocene Epoch, 2 million to 10,000 years ago, glaciers advanced and retreated across Minnesota. In Waseca County, all of the glacial deposits near the land surface were deposited during the last major glacial episode in Minnesota—the late Wisconsin glaciation—about 14,000 years ago. At that time, the Des Moines lobe extended through the Minnesota lowland to its maximum extent: south to Des Moines, Iowa, and east to the border of Steele and Dodge Counties in Minnesota. The Bemis moraine marks its terminal margin. By about 12,000 years ago, ice was no longer active in this region, although stagnant, melting ice still covered much of the county. After the remaining glacial ice in the region completely melted, modern soils developed and alluvium accumulated in modern streams.

The preglacial bedrock surface across the county consists of Ordovician sedimentary rocks (500-450 million years old). This surface is buried by 70 to 350 feet (21 to 106 meters) of glacial sediment (Bloomgren, 1993).

Soils in Waseca County formed mainly in glacial till, which is an unsorted mix of rock debris deposited directly by ice. The till is light olive brown to yellowish

brown, calcareous, pebbly loam. With each advance, the glaciers deposited sediments, the lithology of which indicates the direction of the glacial advance. Till in Waseca County contains (as represented in the very coarse sand fraction) an average of 39 percent crystalline rocks (granitic, mafic igneous, and metamorphic), 24 percent carbonate rocks, and 37 percent shale (Lusardi, 1997). The presence of gray shale indicates that the ice carried debris derived from rocks in the northwest, particularly the Pierre Shale in North Dakota. Because all of the till at the surface is similar in color, texture, and lithology, it is the glacial landforms that provide the depositional history of the ice in this region.

Circular (in places coalescing), flat-topped hills and irregular, rounded hummocks form the dominant landscape across the county. Hilltops range from about 10 to 30 feet (3 to 9 meters) above the base, and abundant depressions and channels, occupied by swamps, separate the hills. The hills formed when unsorted supraglacial debris slumped into holes in the stagnant ice. When the ice melted, the debris remained as hills. This process is known as topographic inversion because what had been a hole in the ice is now a hill on the ground. Where composed of fine grained lacustrine sediment, the circular, flat-topped landforms may be called ice-walled lake plains. In Waseca County, however, little lacustrine sediment was discovered (Lusardi, 1997). Instead of becoming lakes in the ice, these holes served as glacial “storm drains,” collecting anything that washed into them. The thicker the stagnant ice, the deeper the possible hole; the more debris on the ice, the higher the hill. There is within the county a gradation from south to north (and a less distinct gradation from west to east) from circular, flat-topped hills that have low relief (about 10 feet, or 3 meters) to moderate relief (about 20 feet, or 6 meters) to high relief (about 30 feet, or 9 meters). Apparently, the ice, the debris on top of the ice, or both were thinnest in the central part of the county and thicker to the north and east.

To the north and east (north of Everson Lake and the eastern parts of Otisco and New Richland Townships), the circular, flat-topped hills grade into irregular, rounded hummocks. The formation of rounded hummocks instead of circular, flat-topped hills is related to the stability of the stagnant-ice environment. In the central part of the county, the ice wasted in place. Closer to the ice margin, however, water flowing from and along the margin undermined the ice and caused collapse and redistribution of the sediment.

Through the central and southern parts of the county, till forms a relatively level to gently undulating

plain. Circular landforms on the plain, although obvious on aerial photographs, do not have enough relief (less than 10 feet, or less than 3 meters) to appear on a topographic base. These sediments are interpreted as till deposited by ice that had little or no supraglacial till on top (Lusardi, 1997).

In the western part of the county, the till plain is covered by a veneer of silt and clay that was deposited in Glacial Lake Minnesota, which covered parts of Watonwan, Blue Earth, Faribault, and Waseca Counties. In Waseca County, evidence of the lake is obscure. The lake sediment is thin, almost entirely within the zone of soil development, and, therefore, it is difficult to identify. In addition, the distribution of the lake sediment is patchy; exposures in shallow drainage basins and adjacent to stream valleys are predominantly till.

There apparently were two outlets of the lake through Waseca County—one to the north and one to the east. The northern outlet was a network of channels that drained through what is now Lake Elysian into the extensive channel system to the north. Eventually, this drainage flowed eastward into the precursor of the Cannon River in Rice County (Patterson and Hobbs, 1995). The existence of an eastern outlet in the county is more speculative. Water from the lake may have drained through what is now the Le Sueur River valley (Lusardi, 1997).

The Le Sueur River, which now flows west into the Minnesota River, once flowed east in channels developed above and below the glacier and along the ice margin. Several sharp bends in the river represent drainage paths occupied at different times during the late Wisconsin. The Le Sueur River valley west of the confluence with the Little Le Sueur River (sec. 7, T. 106 N., R. 22 W.) is probably a remnant of a previous subglacial drainage active when the ice margin was in the eastern part of the county. Sand and gravel outwash deposits from this earlier drainage fan eastward from an abrupt beginning to the west against the northeast-southwest-trending ice margin (north from sec. 3, T. 105 N., R. 23 W., following the Le Sueur River valley, and continuing north to sec. 1, T. 107 N., R. 21 W.). An indistinct pattern of low-relief linear ridges on the surface of the fan suggests that it may have been deposited on stagnant ice. The ridges represent sediment-filled channels cut into the ice that, because of topographic inversion, appear as ridges on the land surface (Patterson, 1994). Much of this outwash fan was buried under as much as 50 feet (15

meters) of till deposited when the ice continued to advance eastward.

A narrow band of sand and gravel within the buried fan is exposed in a network of channels, one of which is now occupied by the Little Le Sueur River (secs. 1 to 5 and 8 to 12, T. 106 N., R. 22 W.). The sand and gravel can be traced eastward to where the Little Le Sueur River joins the Straight River in Steele County, Minnesota. The meltwater that carved these channels is probably related to the draining of Glacial Lake Minnesota. Water from the lake presumably flowed through channels in the stagnant ice and was funneled into previously excavated lows and channels. Eskers—elongate ridges of stratified sand and gravel—are in some of the channels. These ridges are deposits from streams that flowed in ice-walled channels or tunnels on or under the glacier.

Farther west, the river bends to the southwest. This segment occupies a broad, indistinct trough that extends southwest through Silver Lake and northeast through Clear Lake. There is little topographic expression of this feature, because supraglacial sediment collapsed and filled the channel. Its presence is inferred from the alignment of low areas, lakes, and the river valley (Lusardi, 1997). This trough, as well as other indistinct troughs along the Le Sueur River valley, may correspond to short-lived positions of the ice margin.

Climate

Waseca County is in the interior of the great landmass of North America. This landmass, heated in summer by a sun that is at a high altitude and that shines for long hours, makes the summers warm and pleasant. In contrast, winters are cold, and the land cools rapidly as a result of less effective solar heating. Reduced solar heating in winter is caused by a low sun angle, increased reflection of solar radiation by snow, and shortened day length. Northerly winds from Canada bring in additional frigid air.

Precipitation in Waseca County frequently occurs as snowstorms during the winter and as showers (which are often heavy) during the warmer months when warm moist air moves up from the south. The total annual rainfall is normally adequate for corn and soybeans.

Specific data on temperature and precipitation for the survey area are available on the Web at www.wcc.nrcs.usda.gov/climate/climate-map.html.

Formation and Classification of the Soils

This section relates the soils in the survey area to the major factors of soil formation and describes the system of soil classification.

Formation of the Soils

The natural environment consisting of the thin mantle of material we refer to as soil is dynamic and ever changing. Soils are affected by soil-forming processes involving the interaction of five major factors. These factors are parent material, climate, living organisms, topography, and time (Jenny, 1941). The interaction of these factors generates complex chemical, physical, and biological processes. As a result of these soil-forming processes acting over time, definitive layers, or horizons, develop in the soil.

Climate

Climate is probably the most influential soil-forming factor (Brady, 1974). Moisture and temperature influence the rate of chemical and physical reactions and the growth of microbes in the soil. Native vegetation (for example, hardwood forest or prairie grass) also is influenced by climate. Rainwater eventually enters the soil, dissolving soluble soil materials and transporting them to other parts of the soil profile. This process is known as leaching.

Waseca County has a cool, subhumid, continental climate characterized by wide variations in temperature from summer to winter. During the winter, the soil-forming processes are essentially dormant. The soil is frozen to a depth of 2 to 3 feet. The depth to which frost penetrates the soil is dependent on the amount of snowfall in late fall and early winter.

The climate is fairly uniform across the survey area. Local variations are caused by relief, aspect, and parent material. For example, south- and west-facing slopes tend to be warmer and drier than north- and east-facing slopes. Coarse textured soils tend to be warmer and drier than loamy or clayey soils.

Living Organisms

Plants and animals provide the organic material for the formation of humus. Roots, leaves, and stems provide most of this material. Climate, parent material, and topography affect plant species. Micro-organisms, which are affected by the same factors, perform many vital functions in the soil. Micro-organisms transform organic material into humus, convert forms of nitrogen, and protect plant roots from disease-causing organisms. Micro-organisms generally include bacteria, fungi, and protozoa. Micro-organisms occur in the A horizon, or topsoil, which is the part of the soil profile that has the largest content of organic matter (USDA, 1999). Plants impact soil chemistry. Native prairie grasses have extensive root systems that result in a relatively large amount of accumulated humus, which is less acid than the material formed under hardwood forests. Soils that formed under hardwood forests accumulate less humus that is more acid.

Waseca County is situated where the big woods (hardwood forests) gave way to the native prairie grasslands. Transitional areas of scattered oak stands within areas of grassland were also part of the native vegetation. The original prairies no longer exist in the county. A number of remnant woodlots from the original "big woods" still exist.

Human activity has also influenced the development of soils. Humans have removed natural vegetation; accelerated soil erosion by leaving the soil surface bare; changed the drainage of some soils; and changed the natural topography by removing soil material in some places and filling in other areas.

Topography

Topography, or relief, refers to position on the landscape. Differences in landscape setting affect soil formation by impacting the amount of rainfall that runs off or onto a particular site. Storden, Lester, Reedslake, Le Sueur, Cordova, and Glencoe soils formed in the same parent material—New Ulm Till—

but have different characteristics as a result of the soil-forming processes relative to their position on the landscape. Storden soils occur on the most convex parts of the hillslope (the shoulder). Because they have a high rate of runoff, a relatively small amount of rainfall or snowmelt enters the soil. They exhibit only minimal development of distinct horizons because calcium carbonate has not been allowed to leach downward through the profile. Storden soils, therefore, have calcium carbonate at the surface and have a relatively low content of organic matter. Lester and Reedslake soils are on the less convex parts of the hillslope (the backslope). Less runoff occurs in these areas, and more water infiltrates the soil. As a result, calcium carbonate is leached downward in the soil profile. This “weathering” of the soil profile results in the development of soil horizons. Lester soils are on slopes of 6 percent or more, and Reedslake soils have slopes ranging from 2 to 5 percent. Le Sueur soils, on nearly level, slightly convex summits of hills or slight rises in broad flat areas, have an even lower runoff rate and higher rate of water infiltration than the Reedslake soils. Cordova soils are in nearly level or slightly concave positions. In most years Cordova soils become saturated with water for parts of the growing season. Glencoe soils are in closed depressions. There is essentially no runoff, and a great amount of water runs into the depressions. Glencoe soils are naturally saturated with water for nearly all of the growing season and have standing water on the surface for part of the season.

Extreme differences in the amount of water in the soil affect the kind and intensity of biological and chemical processes in the soil. Different species of plants and micro-organisms live in areas where the soil is saturated with water (such as areas of Glencoe soils) than in areas where water runs off or percolates through the soil (such as areas of Storden or Lester soils). Many tree species do not grow well on soils where water is at or near the surface for much of the growing season. On the other hand, reeds and sedges require sites that are saturated with water at or near the surface during the same period.

Parent Material

Parent material is the physical material in which the soil forms. Parent material determines important physical properties of the soil, such as the ability to store water for plants and the ability to transmit water. Parent material also largely determines the ability to supply important nutrients to plants, such as calcium, phosphorus, and potassium. The inherent physical and chemical properties are related, to a large extent, to

the percentage of sand, silt, and clay in the parent material. Soils that formed in parent materials with a high content of silt have a high capacity to store water for plants. Soils that formed in parent materials with a high content of silt and clay have a high capacity to store nutrients for plants. Soils that formed in parent materials with a high content of sand have a low capacity to store water and nutrients.

The soils of Waseca County formed primarily in parent materials transported and modified by ice and water. Glacial till is the most common parent material in the county. Glacial till is an unsorted mixture of sand, silt, clay, gravel, cobbles, and boulders. Glaciers with origins in Canada transported loamy, calcareous till into Waseca County. Soils that formed in loamy, calcareous glacial till include Glencoe, Canisteo, Webster, Nicollet, Clarion, Omsrud, Storden, Cordova, Le Sueur, Angus, Reedslake, and Lester soils. In some areas of the county, parent material was deposited in a stagnant ice environment as moderately fine textured and fine textured glacial till. Soils that formed in this kind of parent material include Mazaska, Rolfe, Derrynane, Lerdal, and Kilkenny soils.

Soils that formed in coarse textured parent materials occur as sand and gravel as a result of glacial outwash deposits from glacial meltwater. Examples are Estherville, Hawick, and Dickinson soils.

The nearly level margins of Glacial Lake Minnesota are in the southwestern part of the county. Lacustrine sediments were laid down in this area. The soils that formed in fine textured lacustrine sediments include Lura, Brownton, Marna, Barbert, and Guckeen soils.

Some soils in Waseca County formed in organic deposits resulting from the accumulation of decayed plant material over a period of many years. Houghton, Muskego, and Klossner soils are examples.

Time

Time is required for all soil formation. Soils in some parts of the world have been exposed to the soil-forming factors for much longer than the soils in Waseca County. Such soils have been leached of most of their nutrients. Also, the clay particles may have been altered to types of clay or other compounds that have little capacity to store nutrients for plants. These soils are considered to be strongly weathered or “old.” The soils in Waseca County have been subject to the soil-forming processes for only 12,000 to 14,000 years. These soils are considered to be “young” because they still retain large amounts of nutrients for plants to utilize. They also have the capacity to store large amounts of nutrients for plants.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1998 and 1999). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 1 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Mollisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aquoll (*Aqu*, meaning water, plus *oll*, from Mollisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Endoaquolls (*Endo*, meaning within, plus *aquoll*, the suborder of the Mollisols that has an aquic moisture regime).

SUBGROUP. Each great group has a typic

subgroup. Other subgroups are intergrades or extragrades. The typic is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but does not indicate transitions to any other known kind of soil. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective Typic identifies the subgroup that typifies the great group. An example is Typic Endoaquolls.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineral content, mineralogy class, cation-exchange activity class, temperature regime, thickness of the root zone, consistence, moisture equivalent, slope, and permanent cracks. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, superactive, mesic Typic Endoaquolls.

SERIES. The series consists of soils that have similar horizons in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series. An example is the Webster series.

The Official Soil Series Descriptions (OSDs) give information about the series mapped in Waseca County. These descriptions are available at <http://soils.usda.gov>.

Table 1.--Classification of the Soils

Soil name	Family or higher taxonomic class
Angus-----	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Barbert-----	Fine, smectitic, mesic Vertic Argialbolls
Barrington-----	Fine-silty, mixed, superactive, mesic Oxyaquic Argiudolls
Belleville-----	Sandy over loamy, mixed, superactive, mesic Typic Endoaquolls
Belview-----	Fine-loamy, mixed, superactive, mesic Typic Calciudolls
Biscay-----	Fine-loamy over sandy or sandy-skeletal, mixed, superactive, mesic Typic Endoaquolls
Blue Earth-----	Fine-silty, mixed, superactive, calcareous, mesic Mollic Fluvaquents
Brownnton-----	Fine, smectitic, calcareous, mesic Vertic Epiaquolls
Canisteo-----	Fine-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls
Clarion-----	Fine-loamy, mixed, superactive, mesic Typic Hapludolls
Cokato-----	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Coland-----	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
Cordova-----	Fine-loamy, mixed, superactive, mesic Typic Argiaquolls
Crippin-----	Fine-loamy, mixed, superactive, mesic Aquic Hapludolls
Darfur-----	Coarse-loamy, mixed, superactive, mesic Typic Endoaquolls
Dassel-----	Coarse-loamy, mixed, superactive, mesic Typic Endoaquolls
Delft-----	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
Derrynane-----	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
Dickinson-----	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Estherville-----	Sandy, mixed, mesic Typic Hapludolls
Fieldon-----	Coarse-loamy, mixed, superactive, calcareous, mesic Typic Endoaquolls
Gladek-----	Fine-silty, mixed, superactive, mesic Mollic Hapludalfs
Glencoe-----	Fine-loamy, mixed, superactive, mesic Cumulic Endoaquolls
Good Thunder-----	Fine, smectitic, mesic Aquertic Argiudolls
Granby-----	Sandy, mixed, mesic Typic Endoaquolls
Guckeen-----	Fine, smectitic, mesic Aquertic Hapludolls
Hamel-----	Fine-loamy, mixed, superactive, mesic Typic Argiaquolls
Hanlon-----	Coarse-loamy, mixed, superactive, mesic Cumulic Hapludolls
Harps-----	Fine-loamy, mixed, superactive, mesic Typic Calciaquolls
Havelock-----	Fine-loamy, mixed, superactive, calcareous, mesic Cumulic Endoaquolls
Hawick-----	Sandy, mixed, mesic Entic Hapludolls
Houghton-----	Euic, mesic Typic Haplosaprists
Kilkenny-----	Fine, smectitic, mesic Oxyaquic Vertic Hapludalfs
Kingston-----	Fine-silty, mixed, superactive, mesic Aquic Hapludolls
Klossner-----	Loamy, mixed, euic, mesic Terric Haplosaprists
Le Sueur-----	Fine-loamy, mixed, superactive, mesic Aquic Argiudolls
Lerdal-----	Fine, smectitic, mesic Aeric Vertic Epiaqualfs
Lester-----	Fine-loamy, mixed, superactive, mesic Mollic Hapludalfs
Linder-----	Coarse-loamy, mixed, superactive, mesic Aquic Hapludolls
Litchfield-----	Sandy, mixed, mesic Aquic Hapludolls
Lowlein-----	Coarse-loamy, mixed, superactive, mesic Typic Hapludolls
Lura-----	Fine, smectitic, mesic Cumulic Vertic Epiaquolls
Madelia-----	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
Marna-----	Fine, smectitic, mesic Vertic Epiaquolls
Mazaska-----	Fine, smectitic, mesic Vertic Argiaquolls
Medo-----	Loamy, mixed, euic, mesic Terric Haplosaprists
Minneopa-----	Sandy, mixed, mesic Aquic Hapludolls
Minnetonka-----	Fine, smectitic, mesic Vertic Argiaquolls
Muskego-----	Coprogeous, euic, mesic Limnic Haplosaprists
Nicollet-----	Fine-loamy, mixed, superactive, mesic Aquic Hapludolls
Ocheyedan-----	Fine-loamy, mixed, superactive, mesic Typic Hapludolls
Okoboji-----	Fine, smectitic, mesic Cumulic Vertic Endoaquolls
Omsrud-----	Fine-loamy, mixed, superactive, mesic Typic Hapludolls
Reedslake-----	Fine-loamy, mixed, superactive, mesic Typic Argiudolls
Ridgeton-----	Fine-loamy, mixed, superactive, mesic Pachic Hapludolls
Rolfe-----	Fine, smectitic, mesic Typic Argialbolls
Rushriver-----	Coarse-loamy, mixed, superactive, calcareous, mesic Mollic Fluvaquents
Shorewood-----	Fine, smectitic, mesic Aquertic Argiudolls
Spicer-----	Fine-silty, mixed, superactive, calcareous, mesic Typic Endoaquolls
Spillville-----	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls
Storden-----	Fine-loamy, mixed, superactive, mesic Typic Eutrudepts
Suckercreek-----	Coarse-loamy, mixed, superactive, calcareous, mesic Fluvaquentic Endoaquolls
Swanlake-----	Fine-loamy, mixed, superactive, mesic Typic Calciudolls
Tadkee-----	Sandy over loamy, mixed, superactive, nonacid, mesic Mollic Endoaquents
Terril-----	Fine-loamy, mixed, superactive, mesic Cumulic Hapludolls

Table 1.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Tomall-----	Coarse-loamy, mixed, superactive, mesic Cumulic Hapludolls
Truman-----	Fine-silty, mixed, superactive, mesic Typic Hapludolls
Udipsamments-----	Udipsamments
Udorthents-----	Udorthents
Webster-----	Fine-loamy, mixed, superactive, mesic Typic Endoaquolls

Soil Map Unit Descriptions

This section includes the soil map unit descriptions for the soil series mapped in Waseca County.

Characteristics of the soil and the material in which it formed are identified for each soil series. A brief description of the soil profile is provided in the map unit descriptions. For more information about a soil series, the official series description can be viewed or downloaded from the Web. The detailed descriptions follow standards in the "Soil Survey Manual" (Soil Survey Division Staff, 1993). Many of the technical terms used in the descriptions are defined in "Keys to Soil Taxonomy" (Soil Survey Staff, 1998).

The map units on the soil maps in this survey represent the soils or miscellaneous areas in the survey area. These soils or miscellaneous areas are listed as individual components in the map unit descriptions. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is provided in the tables (see Contents).

A map unit delineation on the soil maps represents an area on the landscape. It is identified by differences in the properties and taxonomic classification of components and by the percentage of each component in the map unit.

Components that are dissimilar, or contrasting, are identified in the map unit description. Dissimilar components are those that have properties and behavioral characteristics divergent enough from those of the major components to affect use or to require different management. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps.

Components that are similar to the major components (noncontrasting) are not identified in the map unit description. Similar components are those that have properties and behavioral characteristics similar enough to those of the major components that they do not affect use or require different management.

The presence of multiple components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol is used for each map unit on the soil maps. This symbol precedes the map unit name in the map unit descriptions. Each description includes general information about the unit. The map unit descriptions include representative values in feet and the months in which wet soil moisture status is highest and lowest in the soil profile and ponding is shallowest and deepest on the soil surface. The descriptions also include the classes of flooding and the months in which flooding is least and most likely to occur. Tables 17, 18, and 19 provide a complete display of this data for every month of the year. The available water capacity given in each map unit description is calculated for all horizons in the soil profile. The organic matter content displayed in each map unit description is calculated for all horizons in the soil profile, except those that represent the surface duff layer on forested soils. Table 15 provides a complete display of available water capacity and organic matter content by horizon.

The principal hazards and limitations to be considered in planning for specific uses are described in other sections of this survey.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer or of the underlying layers, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer or of the underlying layers. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is

divided into *soil phases*. The name of a soil phase commonly indicates a feature that affects use or management. For example, Lester loam, 6 to 12 percent slopes, eroded, is a phase of the Lester series.

A map unit is named for the component or components that make up a dominant percentage of the map unit. Many map units consist of one dominant component. These map units are consociations. Canisteo clay loam, 0 to 2 percent slopes, is an example.

Some map units are made up of two or more dominant components. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more components in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. Attempting to delineate the individual components of a complex would result in excessive clutter that could make the map illegible. The pattern and proportion of the components in a complex are somewhat similar in all areas. Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more components that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the components in a mapped area are not uniform. An area can be made up of only one of the dominant components, or it can be made up of all of them. Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes, is an undifferentiated group in this survey area.

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. The Pits component of the Pits, gravel-Udipsamments complex is an example.

Table 2 gives the acreage and proportionate extent of each map unit. Other tables (see Contents) give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

GP—Pits, gravel-Udipsamments complex

Component Description

Pits, gravel

Extent: 50 to 100 percent of the unit

Geomorphic setting: Stream terraces, outwash plains, and moraines

Parent material: Sandy and gravelly outwash

General description: Gravel pits are areas that have been mined for gravel or sand. Specific areas are

actively being mined or are abandoned pits. Because of the variability of this component, interpretations for specific uses are not available. Onsite investigation is needed.

Udipsamments

Extent: 15 to 30 percent of the unit

Geomorphic setting: Moraines, stream terraces, and outwash plains

Parent material: Outwash

General description: Udipsamments are areas of soil that support plant growth. They consist of areas of the pits that have been reclaimed or abandoned. Because of the variability of this component, interpretations for specific uses are not available. Onsite investigation is needed.

L5A—Delft, overwash-Delft complex, 1 to 4 percent slopes

Component Description

Delft, overwash, and similar soils

Extent: 40 to 60 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 4 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 4.5 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.3 inches

Content of organic matter in the upper 10 inches: 3.5 percent

Typical profile:

Ap—0 to 12 inches; loam

A—12 to 37 inches; loam

Bg—37 to 47 inches; clay loam

Cg—47 to 80 inches; loam

Delft and similar soils

Extent: 30 to 55 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 37 inches; loam
 Bg—37 to 50 inches; clay loam
 Cg—50 to 60 inches; loam

Glencoe

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

Terril

Extent: 0 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

L13A—Klossner muck, depressional, 0 to 1 percent slopes

Component Description

Klossner, drained, and similar soils

Extent: 65 to 85 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 50 percent
Typical profile:
 Op,Oa—0 to 26 inches; muck
 2A1—26 to 36 inches; mucky silty clay loam
 2A2—36 to 48 inches; silty clay loam
 2Cg—48 to 80 inches; loam

Mineral soil, drained

Classification: Loamy, mixed, superactive, mesic

Cumulic Endoaquolls

Extent: 5 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 13 inches; loam

A,Bg1—13 to 31 inches; clay loam

Bg2—31 to 45 inches; clay loam

Cg—45 to 80 inches; loam

Houghton, drained

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 75 percent

Typical profile:

Op—0 to 10 inches; muck

Oa—10 to 80 inches; muck

L14A—Houghton muck, depressional, 0 to 1 percent slopes**Component Description****Houghton, drained, and similar soils**

Extent: 65 to 85 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 75 percent

Typical profile:

Op—0 to 10 inches; muck

Oa—10 to 80 inches; muck

Klossner, drained

Extent: 5 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 17.7 inches

Content of organic matter in the upper 10 inches: 50 percent

Typical profile:

Op,Oa—0 to 26 inches; muck
 2A1—26 to 36 inches; mucky silty clay loam
 2A2—36 to 48 inches; silty clay loam
 2Cg—48 to 80 inches; loam

Mineral soil, drained

Classification: Loamy, mixed, superactive, mesic
 Cumulic Endoaquolls

Extent: 5 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 13 inches; loam
 A,Bg1—13 to 31 inches; clay loam
 Bg2—31 to 45 inches; clay loam
 Cg—45 to 80 inches; loam

L15A—Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes

Component Description

Klossner, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over till

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot (August)

Ponding is deepest (depth, months): 3 feet (March, April, May)

Available water capacity to a depth of 60 inches: 17.4 inches

Content of organic matter in the upper 10 inches: 42.5 percent

Typical profile:

Oa—0 to 26 inches; muck
 2A1—26 to 33 inches; silt loam
 2A2—33 to 40 inches; loam
 2Cg—40 to 80 inches; loam

Okoboji, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Mucky silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Alluvium or lacustrine sediments over till

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot (August)

Ponding is deepest (depth, months): 3 feet (March, April, May)

Available water capacity to a depth of 60 inches: 11.9 inches

Content of organic matter in the upper 10 inches: 14 percent

Typical profile:

A1—0 to 10 inches; mucky silty clay loam
 A2—10 to 52 inches; silty clay loam
 Bg—52 to 60 inches; silty clay loam

Glencoe, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot
(August)

Ponding is deepest (depth, months): 3 feet (March,
April, May)

Available water capacity to a depth of 60 inches: 11.4
inches

Content of organic matter in the upper 10 inches: 7
percent

Typical profile:

A—0 to 42 inches; silty clay loam

Bg—42 to 50 inches; clay loam

Cg—50 to 60 inches; loam

Houghton, ponded

Extent: 0 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot
(August)

Ponding is deepest (depth, months): 3 feet (March,
April, May)

Available water capacity to a depth of 60 inches: 23.9
inches

Content of organic matter in the upper 10 inches: 84.5
percent

Typical profile:

Oa—0 to 80 inches; muck

L16A—Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes

Component Description

Muskego, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Organic material over coprogenous
earth

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot
(August)

Ponding is deepest (depth, months): 3 feet (March,
April, May)

Available water capacity to a depth of 60 inches: 19.4
inches

Content of organic matter in the upper 10 inches: 75
percent

Typical profile:

Oa1—0 to 9 inches; muck

Oa2—9 to 36 inches; muck

Lco—36 to 60 inches; coprogenous earth

Blue Earth, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Coprogenous earth

Flooding: None

Wet soil moisture status: At the surface all year

Ponding is shallowest (depth, months): 0.5 foot
(August)

Ponding is deepest (depth, months): 3 feet (March,
April, May)

Available water capacity to a depth of 60 inches: 12.6
inches

Content of organic matter in the upper 10 inches: 17.5
percent

Typical profile:

A—0 to 50 inches; silt loam

Cg—50 to 60 inches; silt loam

Houghton, ponded, and similar soils

Extent: 0 to 100 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months): 0.5 foot (August)
Ponding is deepest (depth, months): 3 feet (March, April, May)
Available water capacity to a depth of 60 inches: 23.9 inches
Content of organic matter in the upper 10 inches: 84.5 percent
Typical profile:
 Oa—0 to 80 inches; muck

Klossner, ponded

Extent: 0 to 20 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over till
Flooding: None
Wet soil moisture status: At the surface all year
Ponding is shallowest (depth, months): 0.5 foot (August)
Ponding is deepest (depth, months): 3 feet (March, April, May)
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
 Oa—0 to 26 inches; muck
 2A1—26 to 33 inches; silt loam
 2A2—33 to 40 inches; loam
 2Cg—40 to 80 inches; loam

L26B—Shorewood silty clay loam, 3 to 6 percent slopes

Component Description

Shorewood and similar soils

Extent: 85 to 95 percent of the unit
Geomorphic setting: Hills on lake plains; hills on moraines
Position on the landform: Backslopes and summits
Slope range: 3 to 6 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October)
Ponding: None
Available water capacity to a depth of 60 inches: 10.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 17 inches; silty clay loam
 Bt—17 to 39 inches; silty clay
 2BCg,2Cg—39 to 60 inches; loam

Good Thunder

Extent: 0 to 10 percent of the unit
Geomorphic setting: Lake plains and moraines
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April, May)
Wet soil moisture status is lowest (depth, months): 5.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 15 inches; silty clay loam
 Bt—15 to 32 inches; silty clay
 C—32 to 80 inches; silt loam

Minnetonka

Extent: 0 to 10 percent of the unit
Geomorphic setting: Lake plains and moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.5
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.8
inches

Content of organic matter in the upper 10 inches: 5
percent

Typical profile:

Ap,A—0 to 13 inches; silty clay loam

Btg—13 to 35 inches; silty clay

Cg—35 to 60 inches; silty clay loam

L36A—Hamel, overwash-Hamel complex, 1 to 4 percent slopes

Component Description

Hamel, overwash, and similar soils

Extent: 40 to 60 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 4 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Somewhat poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 4.5
feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.8
inches

Content of organic matter in the upper 10 inches: 3.5
percent

Typical profile:

Ap—0 to 13 inches; loam

A—13 to 29 inches; clay loam

Btg—29 to 50 inches; clay loam

Cg—50 to 80 inches; loam

Hamel and similar soils

Extent: 30 to 55 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6
inches

Content of organic matter in the upper 10 inches: 6
percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

Terril

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months):
3.6 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 6.7 feet (January, February, July,
August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4
inches

Content of organic matter in the upper 10 inches: 4
percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Glencoe

Extent: 0 to 5 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 13 inches; loam

A,Bg1—13 to 31 inches; clay loam

Bg2—31 to 45 inches; loam

Cg—45 to 80 inches; loam

L40B—Angus-Kilkenny complex, 2 to 6 percent slopes

Component Description

Angus and similar soils

Extent: 35 to 55 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 2.5 percent

Typical profile:

Ap—0 to 8 inches; loam

Bt—8 to 35 inches; clay loam

BC—35 to 40 inches; clay loam

C—40 to 80 inches; loam

Kilkenny and similar soils

Extent: 30 to 50 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and shoulders

Slope range: 2 to 6 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.7 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap—0 to 11 inches; clay loam

Bt—11 to 35 inches; clay loam

2Bk,2C—35 to 80 inches; loam

Lerdal

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: More than 60 inches

Drainage class: Somewhat poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.6 feet (November)

Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches

Content of organic matter in the upper 10 inches: 2.6 percent

Typical profile:

Ap—0 to 8 inches; clay loam

E—8 to 12 inches; clay loam

Bt,Btg—12 to 41 inches; silty clay loam

Bk—41 to 80 inches; loam

Mazaska

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Swales

Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: More than 60 inches
Drainage class: Poorly drained
Parent material: Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 15 inches; silty clay loam
 Btg—15 to 42 inches; clay
 Bkg—42 to 80 inches; loam

L41C2—Lester-Kilkenny complex, 6 to 12 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 40 to 50 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bt—7 to 38 inches; clay loam
 Bk—38 to 60 inches; loam
 C—60 to 80 inches; loam

Kilkenny, eroded, and similar soils

Extent: 35 to 45 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Summits and shoulders

Slope range: 6 to 12 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Glaciofluvial sediments and reworked till over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, June, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 1.9 percent
Typical profile:
 Ap—0 to 9 inches; clay loam
 Bt—9 to 53 inches; clay loam
 2BC,2C—53 to 80 inches; loam

Terril

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 0 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

Derrynane

Extent: 2 to 10 percent of the unit
Geomorphic setting: Moraines

Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained
Parent material: Colluvium or glaciofluvial sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A1—0 to 19 inches; clay loam
 A2—19 to 39 inches; silty clay
 Bg,2Bg—39 to 65 inches; clay loam
 2Cg—65 to 80 inches; loam

L41D2—Lester-Kilkenny complex, 12 to 18 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 40 to 50 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 12 to 18 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam
 Bt—7 to 38 inches; clay loam
 Bk—38 to 60 inches; loam
 C—60 to 80 inches; loam

Kilkenny, eroded, and similar soils

Extent: 25 to 45 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and shoulders

Slope range: 12 to 18 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, June, July, August, September, October, November, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 1.9 percent

Typical profile:

Ap—0 to 9 inches; clay loam
 Bt—9 to 53 inches; clay loam
 2BC,2C—53 to 80 inches; loam

Terril

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 0 to 4 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Derrynane

Extent: 2 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium or glaciofluvial sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A1—0 to 19 inches; clay loam

A2—19 to 39 inches; silty clay

Bg,2Bg—39 to 65 inches; clay loam

2Cg—65 to 80 inches; loam

Ridgeton

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes and backslopes

Slope range: 8 to 14 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 23 inches; loam

A2,AB—23 to 38 inches; loam

Bw—38 to 50 inches; loam

C—50 to 80 inches; loam

L41E—Lester-Kilkenny complex, 18 to 25 percent slopes

Component Description

Lester and similar soils

Extent: 40 to 50 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 18 to 25 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

A—0 to 5 inches; loam

BE,Bt—5 to 34 inches; clay loam

Bk—34 to 60 inches; loam

C—60 to 80 inches; loam

Kilkenny and similar soils

Extent: 35 to 45 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and summits

Slope range: 18 to 25 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, June, July, August, September, October, November, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches

Content of organic matter in the upper 10 inches: 2.7 percent

Typical profile:

A—0 to 7 inches; clay loam

Bt—7 to 31 inches; clay loam
2Bk,2C—31 to 80 inches; loam

Terril

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 0 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
A1,A2—0 to 24 inches; loam
AB—24 to 37 inches; loam
Bw—37 to 57 inches; loam
C—57 to 80 inches; loam

Derrynane

Extent: 2 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium or glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
A1—0 to 20 inches; clay loam
A2—20 to 40 inches; clay loam, silty clay

Btg—40 to 54 inches; clay loam
2Cg—54 to 80 inches; loam

Ridgeton

Extent: 0 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes and backslopes
Slope range: 10 to 20 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
A1,A2,A3—0 to 32 inches; loam
Bw—32 to 40 inches; loam
C1,C2—40 to 80 inches; loam

L48A—Derrynane, overwash-Derrynane complex, 1 to 4 percent slopes

Component Description

Derrynane, overwash, and similar soils

Extent: 40 to 60 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 4 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Colluvium or glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): 4.5 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 9.7 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
Ap,A1—0 to 16 inches; clay loam

A2,AE,Bt—16 to 48 inches; clay loam
 Btg—48 to 67 inches; clay loam
 Cg—67 to 80 inches; loam

Derrynane and similar soils

Extent: 30 to 55 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium or glaciofluvial sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A1—0 to 19 inches; clay loam
 A2—19 to 39 inches; silty clay
 Bg,2Bg—39 to 65 inches; clay loam
 2Cg—65 to 80 inches; loam

Glencoe

Extent: 5 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

Terril

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

L49A—Klossner soils, depressional, 0 to 1 percent slopes

Component Description

Klossner, surface drained, and similar soils

Extent: 50 to 100 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (April, May, June)
Wet soil moisture status is lowest (depth, months): 1.5 feet (February)

Ponding does not occur (months): January, February, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (March, April, May)

Available water capacity to a depth of 60 inches: 17.4 inches

Content of organic matter in the upper 10 inches: 42.5 percent

Typical profile:

Oa—0 to 26 inches; muck

2A1—26 to 33 inches; silt loam

2A2—33 to 40 inches; loam

2Cg—40 to 80 inches; loam

Klossner, drained, and similar soils

Extent: 0 to 40 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 17.7 inches

Content of organic matter in the upper 10 inches: 50 percent

Typical profile:

Op,Oa—0 to 26 inches; muck

2A1—26 to 36 inches; mucky silty clay loam

2A2—36 to 48 inches; silty clay loam

2Cg—48 to 80 inches; loam

Mineral soil, drained

Classification: Loamy, mixed, superactive, mesic Cumulic Endoaquolls

Extent: 5 to 25 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 13 inches; loam

A,Bg1—13 to 31 inches; clay loam

Bg2—31 to 45 inches; clay loam

Cg—45 to 80 inches; loam

L50A—Houghton and Muskego soils, depressional, 0 to 1 percent slopes

Component Description

Houghton, surface drained, and similar soils

Extent: 20 to 60 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (April, May, June)

Wet soil moisture status is lowest (depth, months): 1.5 feet (February)

Ponding does not occur (months): January, February, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (March, April, May)

Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 84.5 percent

Typical profile:

Oa—0 to 80 inches; muck

Muskego, surface drained, and similar soils

Extent: 20 to 60 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over coprogenous earth

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (April, May, June)

Wet soil moisture status is lowest (depth, months): 1.5 feet (February)

Ponding does not occur (months): January, February, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (March, April, May)

Available water capacity to a depth of 60 inches: 19.4 inches

Content of organic matter in the upper 10 inches: 75 percent

Typical profile:

Oa1—0 to 9 inches; muck

Oa2—9 to 36 inches; muck

Lco—36 to 60 inches; coprogenous earth

Klossner, drained

Extent: 0 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 17.7 inches

Content of organic matter in the upper 10 inches: 50 percent

Typical profile:

Op,Oa—0 to 26 inches; muck

2A1—26 to 36 inches; mucky silty clay loam

2A2—36 to 48 inches; silty clay loam

2Cg—48 to 80 inches; loam

Mineral soil, drained

Classification: Loamy, mixed, superactive, mesic Cumulic Endoaquolls

Extent: 0 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding does not occur (months): January, February, May, June, July, August, September, October, November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 13 inches; loam

A,Bg1—13 to 31 inches; clay loam

Bg2—31 to 45 inches; clay loam

Cg—45 to 80 inches; loam

L51C2—Gladek silt loam, 6 to 12 percent slopes, eroded***Component Description*****Gladek, eroded, and similar soils**

Extent: 70 to 90 percent of the unit

Geomorphic setting: Hills on lake plains

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Lacustrine sediments

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap—0 to 10 inches; silt loam

Bt—10 to 39 inches; silt loam

C—39 to 80 inches; silt loam

Barrington

Extent: 5 to 25 percent of the unit

Geomorphic setting: Hills on lake plains

Position on the landform: Summits and backslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 9.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 15 inches; silt loam

Bt—15 to 33 inches; silt loam

C—33 to 60 inches; stratified loamy very fine sand to silt loam

Lester, eroded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam

Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam

C—60 to 80 inches; loam

Madelia

Extent: 0 to 10 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 19 inches; silty clay loam

Bg—19 to 37 inches; silty clay loam

Cg—37 to 60 inches; silt loam

L56A—Muskego and Klossner soils, 0 to 1 percent slopes, frequently flooded

Component Description

Muskego, frequently flooded, and similar soils

Extent: 30 to 100 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over coprogenous earth

Flooding does not occur (months): January, February, August, September, October, November, December

Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status is highest (depth, months): At the surface (April, May, June)
Wet soil moisture status is lowest (depth, months): 1.5 feet (February)
Ponding is shallowest (depth, months): 0.5 foot (June)
Ponding is deepest (depth, months): 1 foot (March, April, May)
Available water capacity to a depth of 60 inches: 19.4 inches
Content of organic matter in the upper 10 inches: 75 percent
Typical profile:
 Oa1—0 to 9 inches; muck
 Oa2—9 to 36 inches; muck
 Lco—36 to 60 inches; coprogenous earth

Klossner, frequently flooded, and similar soils

Extent: 30 to 100 percent of the unit
Geomorphic setting: Flood plains
Position on the landform: Flats
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over till
Flooding does not occur (months): January, February, August, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status is highest (depth, months): At the surface (April, May, June)
Wet soil moisture status is lowest (depth, months): 1.5 feet (February)
Ponding is shallowest (depth, months): 0.5 foot (June)
Ponding is deepest (depth, months): 1 foot (March, April, May)
Available water capacity to a depth of 60 inches: 17.4 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
 Oa—0 to 26 inches; muck
 2A1—26 to 33 inches; silt loam
 2A2—33 to 40 inches; loam
 2Cg—40 to 80 inches; loam

Suckercreek, frequently flooded

Extent: 0 to 40 percent of the unit
Geomorphic setting: Flood plains
Position on the landform: Flats

Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Alluvium
Flooding does not occur (months): January, February, August, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status is highest (depth, months): At the surface (April, May, June)
Wet soil moisture status is lowest (depth, months): 1.8 feet (February)
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
 A—0 to 22 inches; loam
 Cg—22 to 80 inches; loamy fine sand

L57A—Medo muck, depressional, 0 to 1 percent slopes

Component Description

Medo, drained, and similar soils

Extent: 65 to 85 percent of the unit
Geomorphic setting: Depressions on stream terraces and outwash plains
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over outwash
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 14.3 inches
Content of organic matter in the upper 10 inches: 70 percent
Typical profile:
 Op,Oa—0 to 27 inches; muck

- 2A—27 to 35 inches; mucky loam
- 2Bg—35 to 39 inches; sandy clay loam
- 2Cg—39 to 80 inches; gravelly loamy coarse sand

Mineral soil, drained

Classification: Coarse-loamy, mixed, superactive, mesic Typic Endoaquolls

Extent: 5 to 20 percent of the unit

Geomorphic setting: Depressions on stream terraces and outwash plains

Slope range: 0 to 1 percent

Texture of the surface layer: Fine sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 6.8 inches

Content of organic matter in the upper 10 inches: 8 percent

Typical profile:

Ap,A3—0 to 23 inches; fine sandy loam

Bg—23 to 31 inches; stratified loamy fine sand to fine sandy loam

2Cg—31 to 60 inches; stratified loamy sand to coarse sand

Houghton, drained

Extent: 0 to 10 percent of the unit

Geomorphic setting: Depressions on stream terraces and outwash plains

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 75 percent

Typical profile:

Op—0 to 10 inches; muck

Oa—10 to 80 inches; muck

L63A—Klossner muck, lake plain, depressional, 0 to 1 percent slopes

Component Description

Klossner and similar soils

Extent: 75 to 95 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Organic material over lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 17.4 inches

Content of organic matter in the upper 10 inches: 42.5 percent

Typical profile:

Op,Oa—0 to 25 inches; muck

2A—25 to 40 inches; silty clay loam

2Cg—40 to 80 inches; silty clay loam

Lura

Extent: 5 to 15 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silty clay

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 9.6 inches

Content of organic matter in the upper 10 inches: 8 percent

Typical profile:

Ap—0 to 10 inches; silty clay

A—10 to 58 inches; clay

Bg—58 to 72 inches; silty clay

Brownton

Extent: 0 to 10 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Rims of depressions

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 22 inches; silty clay loam

Bg—22 to 38 inches; silty clay

2Cg—38 to 60 inches; loam

L64A—Tadkee-Tadkee, depressional, complex, 0 to 2 percent slopes

Component Description

Tadkee and similar soils

Extent: 20 to 70 percent of the unit

Geomorphic setting: Beaches on moraines

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Loamy fine sand

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Beach sand over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 7.6 inches

Content of organic matter in the upper 10 inches: 4.3 percent

Typical profile:

A—0 to 6 inches; loamy fine sand

Bg—6 to 34 inches; sand

2Cg—34 to 80 inches; loam

Tadkee, depressional, and similar soils

Extent: 20 to 70 percent of the unit

Geomorphic setting: Beaches on moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Mucky loamy fine sand

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Beach sand over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April, May, June)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (June)

Ponding is deepest (depth, months): 1 foot (March, April, May)

Available water capacity to a depth of 60 inches: 9.8 inches

Content of organic matter in the upper 10 inches: 12.1 percent

Typical profile:

A—0 to 6 inches; mucky loamy fine sand

Bg—6 to 27 inches; sand

2Cg—27 to 80 inches; loam

Better drained soil

Classification: Sandy over loamy, mixed, superactive, mesic Aquic Udorthents

Extent: 0 to 20 percent of the unit

Geomorphic setting: Beaches on moraines

Position on the landform: Slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Loamy sand

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained
Parent material: Outwash over till
Flooding: None
Wet soil moisture status is highest (depth, months):
 2.5 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.2 inches
Content of organic matter in the upper 10 inches: 2.1 percent
Typical profile:
 A—0 to 6 inches; loamy sand
 Bw—6 to 25 inches; loamy sand
 2Cg—25 to 80 inches; loam

Granby

Extent: 0 to 6 percent of the unit
Geomorphic setting: Beaches on moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Loamy fine sand
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Outwash
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April, May, June)
Wet soil moisture status is lowest (depth, months): 1.8 feet (August)
Ponding is shallowest (depth, months): 0.5 foot (June)
Ponding is deepest (depth, months): 1 foot (March, April, May)
Available water capacity to a depth of 60 inches: 4.9 inches
Content of organic matter in the upper 10 inches: 7 percent
Typical profile:
 A—0 to 12 inches; loamy fine sand
 AC—12 to 24 inches; loamy fine sand
 C—24 to 60 inches; loamy fine sand

Less sandy soil

Classification: Fine-loamy, mixed, superactive, calcareous, mesic Mollic Endoaquepts
Extent: 0 to 5 percent of the unit
Geomorphic setting: Beaches on moraines
Position on the landform: Flats
Slope range: 0 to 2 percent
Texture of the surface layer: Loamy fine sand
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
 A—0 to 4 inches; loamy fine sand
 Bg—4 to 20 inches; loam
 Cg—20 to 80 inches; loam

L73A—Blue Earth mucky silty clay loam, depressional, 0 to 1 percent slopes

Component Description

Blue Earth and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Lake plains and moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Mucky silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Coprogenous earth over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 12.6 inches
Content of organic matter in the upper 10 inches: 17.5 percent
Typical profile:
 Ap—0 to 10 inches; mucky silty clay loam
 Cg—10 to 68 inches; mucky silty clay loam
 2Cg—68 to 80 inches; loam

Belleville

Extent: 5 to 15 percent of the unit
Geomorphic setting: Beaches on moraines
Position on the landform: Flats

Slope range: 0 to 2 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
 Ap—0 to 11 inches; sandy loam
 Bg—11 to 27 inches; loamy sand
 2Bg—27 to 48 inches; loam
 2Cg—48 to 80 inches; loam

Canisteo

Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Bkg—18 to 39 inches; loam
 Cg—39 to 80 inches; loam

L74A—Estherville sandy loam, terrace, 0 to 2 percent slopes

Component Description

Estherville and similar soils

Extent: 80 to 90 percent of the unit

Geomorphic setting: Stream terraces
Position on the landform: Flats and slight rises
Slope range: 0 to 2 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 5 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 4.1 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
 Ap,A—0 to 13 inches; sandy loam
 Bw1—13 to 18 inches; sandy loam
 2Bw2—18 to 23 inches; loamy coarse sand
 2C—23 to 60 inches; gravelly coarse sand

Hawick

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on outwash plains
Position on the landform: Summits and backslopes
Slope range: 2 to 4 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
 Ap—0 to 7 inches; sandy loam
 Bw,C—7 to 80 inches; gravelly coarse sand

Biscay

Extent: 0 to 5 percent of the unit
Geomorphic setting: Outwash plains
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Outwash

Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 2
 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.5
 inches
Content of organic matter in the upper 10 inches: 6
 percent
Typical profile:
 Ap,A—0 to 20 inches; loam
 Bg—20 to 28 inches; loam
 2BCg—28 to 36 inches; gravelly loam
 2Cg—36 to 60 inches; gravelly coarse sand

L75B—Barrington silt loam, 2 to 6 percent slopes

Component Description

Barrington and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Hills on lake plains
Position on the landform: Backslopes and summits
Slope range: 2 to 6 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Moderately well drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
 2.5 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 9.4
 inches
Content of organic matter in the upper 10 inches: 4
 percent
Typical profile:
 Ap,A—0 to 15 inches; silt loam
 Bt—15 to 33 inches; silt loam
 C—33 to 60 inches; stratified loamy very fine sand
 to silt loam

Gladek

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on lake plains
Position on the landform: Shoulders and backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Well drained
Parent material: Lacustrine sediments
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet
 all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.6
 inches
Content of organic matter in the upper 10 inches: 3
 percent
Typical profile:
 Ap—0 to 10 inches; silt loam
 Bt—10 to 39 inches; silty clay loam, silt loam
 C—39 to 80 inches; silt loam, very fine sandy
 loam

Madelia

Extent: 0 to 5 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3
 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7
 inches
Content of organic matter in the upper 10 inches: 6
 percent
Typical profile:
 Ap,A,AB—0 to 19 inches; silty clay loam
 Bg—19 to 37 inches; silty clay loam
 Cg—37 to 60 inches; silt loam

L76B—Dickinson fine sandy loam, 1 to 6 percent slopes

Component Description

Dickinson and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Hills on deltas; hills on outwash
 plains
Position on the landform: Summits and backslopes

Slope range: 1 to 6 percent
Texture of the surface layer: Fine sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 5 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 6.1 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
 Ap,A—0 to 14 inches; fine sandy loam
 Bw—14 to 39 inches; fine sandy loam
 C—39 to 60 inches; loamy fine sand

Litchfield

Extent: 5 to 15 percent of the unit
Geomorphic setting: Outwash plains, terraces, and deltas
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Loamy fine sand
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Outwash
Flooding: None
Wet soil moisture status is highest (depth, months): 1.3 feet (April)
Wet soil moisture status is lowest (depth, months): 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.2 inches
Content of organic matter in the upper 10 inches: 2 percent
Typical profile:
 Ap,A,AB—0 to 20 inches; loamy fine sand
 Bw—20 to 33 inches; fine sand
 BC—33 to 40 inches; very fine sandy loam
 C—40 to 80 inches; loamy fine sand

Darfur

Extent: 0 to 10 percent of the unit
Geomorphic setting: Outwash plains
Position on the landform: Flats
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained
Parent material: Outwash
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.3 percent
Typical profile:
 Ap—0 to 9 inches; loam
 A,AB—9 to 19 inches; loam
 Bg—19 to 31 inches; fine sandy loam
 Cg—31 to 60 inches; stratified fine sand to loamy fine sand to fine sandy loam

Clarion

Extent: 0 to 5 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and summits
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
 Ap,A—0 to 14 inches; loam
 Bw—14 to 33 inches; loam
 C—33 to 60 inches; loam

L77A—Brownton silty clay loam, 0 to 2 percent slopes

Component Description

Brownton and similar soils

Extent: 65 to 90 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Rims of depressions

Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 22 inches; silty clay loam
 Bg—22 to 38 inches; silty clay
 2Cg—38 to 60 inches; loam

Marna

Extent: 5 to 20 percent of the unit
Geomorphic setting: Moraines and lake plains
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 20 inches; silty clay loam
 Bg—20 to 32 inches; clay
 2Bg—32 to 41 inches; clay loam
 2Bkg—41 to 60 inches; loam

Lura

Extent: 5 to 15 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Silty clay

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8 percent
Typical profile:
 Ap—0 to 10 inches; silty clay
 A—10 to 58 inches; clay
 Bg—58 to 72 inches; silty clay

L78A—Canisteo clay loam, 0 to 2 percent slopes

Component Description

Canisteo and similar soils

Extent: 55 to 85 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Bkg—18 to 39 inches; loam
 Cg—39 to 80 inches; loam

Crippin

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,AB—0 to 15 inches; loam
 Bw—15 to 27 inches; loam
 C—27 to 60 inches; loam

Glencoe

Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

Canisteo, depressional

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 17 inches; silty clay loam
 Bg—17 to 30 inches; silty clay loam
 2Cg—30 to 60 inches; loam

Harps

Extent: 0 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Apk,Ak—0 to 13 inches; clay loam
 Bk—13 to 30 inches; loam
 Cg—30 to 60 inches; loam

Webster

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: More than 60 inches
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3
 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7
 inches
Content of organic matter in the upper 10 inches: 5.5
 percent
Typical profile:
 Ap,A—0 to 19 inches; clay loam
 Bg—19 to 26 inches; clay loam
 BCg,Cg—26 to 60 inches; loam

L79B—Clarion loam, 2 to 5 percent slopes**Component Description****Clarion and similar soils**

Extent: 50 to 80 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and summits
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: More than 60 inches
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 3.6 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (January, February, July, August,
 September, October, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9
 inches
Content of organic matter in the upper 10 inches: 4.5
 percent
Typical profile:
 Ap,A—0 to 14 inches; loam
 Bw—14 to 33 inches; loam
 Bk—33 to 60 inches; loam

Clarion, eroded

Extent: 10 to 40 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 3.6 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (January, February, July, August,
 September, October, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9
 inches
Content of organic matter in the upper 10 inches: 2.5
 percent
Typical profile:
 Ap—0 to 10 inches; loam
 Bw—10 to 38 inches; loam
 Bk—38 to 60 inches; loam

Nicollet

Extent: 0 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 1.5 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7
 inches
Content of organic matter in the upper 10 inches: 6
 percent
Typical profile:
 Ap,A—0 to 17 inches; clay loam
 Bw,Bg1,Bg2—17 to 33 inches; clay loam
 Bg3—33 to 36 inches; clay loam
 Cg—36 to 60 inches; loam

Webster

Extent: 0 to 5 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 19 inches; clay loam
 Bg—19 to 26 inches; clay loam
 BCg,Cg—26 to 60 inches; loam

L80C2—Lester loam, 6 to 12 percent slopes, eroded
Component Description
Lester, eroded, and similar soils

Extent: 65 to 90 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam
 C—60 to 80 inches; loam

Terril

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

Hamel

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

Reedslake

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and backslopes

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
3.6 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 6.7 feet (January, February, July,
August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

Storden, eroded

Extent: 0 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam

Bk—7 to 55 inches; loam

C—55 to 80 inches; loam

L80D2—Lester loam, 12 to 18 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 60 to 80 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam

Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam

C—60 to 80 inches; loam

Ridgeton

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 9 to 14 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 23 inches; loam

A2,AB—23 to 38 inches; loam

Bw—38 to 50 inches; loam

C—50 to 80 inches; loam

Storden, eroded

Extent: 0 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders and backslopes
Slope range: 12 to 18 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

Terril

Extent: 2 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

Hamel

Extent: 1 to 4 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 4 percent

Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.6 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 24 inches; loam
 Btg—24 to 46 inches; clay loam
 Cg—46 to 80 inches; loam

L81A—Cordova clay loam, 0 to 2 percent slopes**Component Description****Cordova and similar soils**

Extent: 75 to 90 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Btg—18 to 38 inches; clay loam
 Cg—38 to 80 inches; loam

Le Sueur

Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

Rolfe

Extent: 0 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Glaciolacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; silt loam

E—12 to 20 inches; silt loam

Btg—20 to 35 inches; silty clay

2Bt—35 to 51 inches; clay loam

2Cg—51 to 60 inches; loam

L82A—Marna silty clay loam, 0 to 2 percent slopes

Component Description

Marna and similar soils

Extent: 70 to 90 percent of the unit

Geomorphic setting: Moraines and lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 20 inches; silty clay loam

Bg—20 to 32 inches; clay

2Bg—32 to 41 inches; clay loam

2Bkg—41 to 60 inches; loam

Barbert

Extent: 0 to 15 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 3.7 percent

Typical profile:

Ap—0 to 7 inches; silt loam

E—7 to 17 inches; silt loam

Btg—17 to 43 inches; clay

C—43 to 60 inches; silty clay loam

Guckeen

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines and lake plains

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April, May)

Wet soil moisture status is lowest (depth, months): 5.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.1 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,A—0 to 15 inches; silty clay loam

Bw—15 to 24 inches; silty clay loam

2Bw—24 to 30 inches; clay loam

2Cg—30 to 60 inches; loam

L83A—Webster clay loam, 0 to 2 percent slopes

Component Description

Webster and similar soils

Extent: 50 to 85 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 19 inches; clay loam

Bg—19 to 26 inches; clay loam

BCg,Cg—26 to 60 inches; loam

Glencoe

Extent: 0 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 10 inches; clay loam

A,ABg—10 to 35 inches; clay loam

Bg—35 to 48 inches; loam

Cg—48 to 60 inches; loam

Canisteo

Extent: 0 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and rims of depressions

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None
Available water capacity to a depth of 60 inches: 10.3 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Bkg—18 to 39 inches; loam
 Cg—39 to 80 inches; loam

Nicollet

Extent: 0 to 20 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 17 inches; clay loam
 Bw,Bg1,Bg2—17 to 33 inches; clay loam
 Bg3—33 to 36 inches; clay loam
 Cg—36 to 60 inches; loam

L84A—Glencoe clay loam, depressional, 0 to 1 percent slopes

Component Description

Glencoe and similar soils

Extent: 75 to 100 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

Very poorly drained muck

Classification: Fine-loamy, mixed, superactive, mesic Histic Endoaquolls
Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 13.6 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
 Op,Oa—0 to 12 inches; muck
 A—12 to 29 inches; clay loam
 Cg—29 to 60 inches; loam

Canisteo

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained

Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3
 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7
 inches
Content of organic matter in the upper 10 inches: 5.5
 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Bkg—18 to 39 inches; loam
 Cg—39 to 80 inches; loam

Harps

Extent: 0 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3
 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6
 inches
Content of organic matter in the upper 10 inches: 4
 percent
Typical profile:
 Apk,Ak—0 to 13 inches; clay loam
 Bk—13 to 30 inches; loam
 Cg—30 to 60 inches; loam

L85A—Nicollet clay loam, 1 to 3 percent slopes

Component Description

Nicollet and similar soils

Extent: 70 to 95 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60
 inches)

Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 1.5 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7
 inches
Content of organic matter in the upper 10 inches: 6
 percent
Typical profile:
 Ap,A—0 to 17 inches; clay loam
 Bw,Bg1,Bg2—17 to 33 inches; clay loam
 Bg3—33 to 36 inches; clay loam
 Cg—36 to 60 inches; loam

Clarion

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and summits
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months):
 3.6 feet (April)
Wet soil moisture status is lowest (depth, months):
 More than 5 feet (January, February, July, August,
 September, October, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9
 inches
Content of organic matter in the upper 10 inches: 4.5
 percent
Typical profile:
 Ap,A—0 to 14 inches; loam
 Bw—14 to 33 inches; loam
 Bk—33 to 60 inches; loam

Webster

Extent: 2 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60
 inches)
Drainage class: Poorly drained
Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7
inches

Content of organic matter in the upper 10 inches: 5.5
percent

Typical profile:

Ap,A—0 to 19 inches; clay loam

Bg—19 to 26 inches; clay loam

BCg,Cg—26 to 60 inches; loam

L86A—Madelia silty clay loam, 0 to 2 percent slopes

Component Description

Madelia and similar soils

Extent: 80 to 95 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7
inches

Content of organic matter in the upper 10 inches: 6
percent

Typical profile:

Ap,A,AB—0 to 19 inches; silty clay loam

Bg—19 to 37 inches; silty clay loam

Cg—37 to 60 inches; silt loam

Okoboji

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines and lake plains

Slope range: 0 to 1 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2
feet (August)

Ponding is shallowest (depth, months): 0.5 foot
(March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 12.1
inches

Content of organic matter in the upper 10 inches: 7.7
percent

Typical profile:

Ap,A—0 to 26 inches; silty clay loam

Bg—26 to 42 inches; silty clay

Cg—42 to 60 inches; silty clay loam

Spicer

Extent: 0 to 10 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Rims of depressions

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7
inches

Content of organic matter in the upper 10 inches: 6
percent

Typical profile:

Ap,A—0 to 16 inches; silty clay loam

Bg,BCg—16 to 40 inches; silt loam

Cg—40 to 60 inches; silt loam

Kingston

Extent: 0 to 5 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Somewhat poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.3 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 16 inches; silty clay loam

Bw—16 to 25 inches; silty clay loam

C—25 to 60 inches; silt loam

L87A—Kingston silty clay loam, 1 to 3 percent slopes

Component Description

Kingston and similar soils

Extent: 70 to 90 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.3 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 16 inches; silty clay loam

Bw—16 to 25 inches; silty clay loam

C—25 to 60 inches; silt loam

Truman

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on lake plains

Position on the landform: Backslopes and summits

Slope range: 2 to 6 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
3.6 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 12 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,AB—0 to 14 inches; silt loam

Bw,BC—14 to 36 inches; silt loam

C—36 to 60 inches; silt loam

Madelia

Extent: 0 to 10 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 19 inches; silty clay loam

Bg—19 to 37 inches; silty clay loam

Cg—37 to 60 inches; silt loam

L88A—Lura silty clay, depressional, 0 to 1 percent slopes

Component Description

Lura and similar soils

Extent: 75 to 95 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silty clay

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8 percent
Typical profile:
 Ap—0 to 10 inches; silty clay
 A—10 to 58 inches; clay
 Bg—58 to 72 inches; silty clay

Brownton

Extent: 0 to 15 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 22 inches; silty clay loam
 Bg—22 to 38 inches; silty clay
 2Cg—38 to 60 inches; loam

Organic soil

Classification: Fine, smectitic, mesic Histic Epiaquolls
Extent: 0 to 10 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 14.2 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
 Op—0 to 10 inches; muck
 2A1—10 to 26 inches; mucky silty clay loam
 2A2—26 to 48 inches; silty clay loam
 2Cg—48 to 80 inches; silty clay

L89A—Guckeen silty clay loam, 0 to 3 percent slopes

Component Description

Guckeen and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Moraines and lake plains
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April, May)
Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
 Ap,A—0 to 15 inches; silty clay loam
 Bw—15 to 24 inches; silty clay loam

2Bw—24 to 30 inches; clay loam

2Cg—30 to 60 inches; loam

Marna

Extent: 0 to 15 percent of the unit

Geomorphic setting: Lake plains and moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 20 inches; silty clay loam

Bg—20 to 32 inches; clay

2Bg—32 to 41 inches; clay loam

2Bkg—41 to 60 inches; loam

Clarion clay loam

Extent: 0 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Lacustrine sediment over till

Flooding: None

Wet soil moisture status is highest (depth, months):
3.6 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 13 inches; clay loam

Bw—13 to 37 inches; clay loam

C—37 to 80 inches; loam

L90A—Le Sueur clay loam, 0 to 3 percent slopes

Component Description

Le Sueur and similar soils

Extent: 70 to 85 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

Cordova

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Btg—18 to 38 inches; clay loam

Cg—38 to 80 inches; loam

Reedslake

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and backslopes

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

L91A—Mazaska silty clay loam, 0 to 2 percent slopes

Component Description

Mazaska and similar soils

Extent: 75 to 95 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 15 inches; silty clay loam

Btg—15 to 42 inches; clay

Bkg—42 to 80 inches; loam

Lerdal

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.6 feet (November)

Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches

Content of organic matter in the upper 10 inches: 2.6 percent

Typical profile:

Ap—0 to 8 inches; clay loam

E—8 to 12 inches; clay loam

Bt,Btg—12 to 41 inches; silty clay loam

Bk—41 to 80 inches; loam

Rolfe

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Glaciolacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; silt loam

E—12 to 20 inches; silt loam

Btg—20 to 35 inches; silty clay

2Bt—35 to 51 inches; clay loam

2Cg—51 to 60 inches; loam

L92A—Darfur loam, 0 to 2 percent slopes

Component Description

Darfur and similar soils

Extent: 70 to 90 percent of the unit

Geomorphic setting: Outwash plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 2 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 8.5 inches

Content of organic matter in the upper 10 inches: 6.3 percent

Typical profile:

Ap—0 to 9 inches; loam

A,AB—9 to 19 inches; loam

Bg—19 to 31 inches; fine sandy loam

Cg—31 to 60 inches; stratified fine sand to loamy fine sand to fine sandy loam

Fieldon

Extent: 5 to 15 percent of the unit

Geomorphic setting: Outwash plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (April)

Wet soil moisture status is lowest (depth, months): 2 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 7.9 inches

Content of organic matter in the upper 10 inches: 6.5 percent

Typical profile:

Ap,A,AB—0 to 19 inches; loam

Bg,Bw—19 to 37 inches; fine sandy loam

C,Cg—37 to 60 inches; stratified fine sand to loamy fine sand

Litchfield

Extent: 0 to 10 percent of the unit

Geomorphic setting: Outwash plains

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Loamy fine sand

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): 1.3 feet (April)

Wet soil moisture status is lowest (depth, months): 3 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 7.2 inches

Content of organic matter in the upper 10 inches: 2 percent

Typical profile:

Ap,A,AB—0 to 20 inches; loamy fine sand

Bw—20 to 33 inches; fine sand

BC—33 to 40 inches; very fine sandy loam

C—40 to 80 inches; loamy fine sand

Webster

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7
inches

Content of organic matter in the upper 10 inches: 5.5
percent

Typical profile:

Ap,A—0 to 19 inches; clay loam

Bg—19 to 26 inches; clay loam

BCg,Cg—26 to 60 inches; loam

Dassel

Extent: 0 to 5 percent of the unit

Geomorphic setting: Outwash plains

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Mucky fine sandy loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April)

Wet soil moisture status is lowest (depth, months): 1.8
feet (August)

Ponding does not occur (months): January, February,
May, June, July, August, September, October,
November, December

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 8.6
inches

Content of organic matter in the upper 10 inches: 8.9
percent

Typical profile:

Ap—0 to 6 inches; mucky fine sandy loam

A—6 to 23 inches; fine sandy loam

Bg—23 to 31 inches; loamy very fine sand

Cg—31 to 60 inches; fine sand

L93A—Muskego muck, depressional, 0 to 1 percent slopes

Component Description

Muskego and similar soils

Extent: 70 to 90 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Muck

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Organic material/coprogenous earth
over till

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2
feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot
(March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 15.6
inches

Content of organic matter in the upper 10 inches: 75
percent

Typical profile:

Op,Oa—0 to 16 inches; muck

Lco—16 to 76 inches; coprogenous earth

Cg—76 to 80 inches; loam

Blue Earth

Extent: 0 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Mucky silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Coprogenous earth over till

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2
feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot
(March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 12.6
inches

Content of organic matter in the upper 10 inches: 17.5
percent

Typical profile:

Ap—0 to 10 inches; mucky silty clay loam

Cg—10 to 68 inches; mucky silty clay loam

2Cg—68 to 80 inches; loam

Mineral soil, drained

Classification: Loamy, mixed, superactive, mesic
Cumulic Endoaquolls

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.1 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 13 inches; loam
 A,Bg1—13 to 31 inches; clay loam
 Bg2—31 to 45 inches; clay loam
 Cg—45 to 80 inches; loam

Belleville

Extent: 0 to 5 percent of the unit
Geomorphic setting: Beaches on moraines
Position on the landform: Flats
Slope range: 0 to 2 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Glaciolacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.4 inches
Content of organic matter in the upper 10 inches: 4.5 percent
Typical profile:
 Ap—0 to 11 inches; sandy loam
 Bg—11 to 27 inches; loamy sand
 2Bg—27 to 48 inches; loam
 2Cg—48 to 80 inches; loam

L94A—Lowlein fine sandy loam, terrace, 0 to 3 percent slopes

Component Description

Lowlein and similar soils

Extent: 60 to 85 percent of the unit
Geomorphic setting: Stream terraces
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Fine sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Outwash over lacustrine silty sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
 Ap,A—0 to 18 inches; fine sandy loam
 Bw1—18 to 27 inches; fine sandy loam
 Bw2—27 to 46 inches; stratified loamy sand to fine sandy loam
 2Bw—46 to 72 inches; silt loam
 2C—72 to 80 inches; silt loam

Linder

Extent: 10 to 25 percent of the unit
Geomorphic setting: Stream terraces
Position on the landform: Flats and slight rises
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Outwash
Flooding: None
Wet soil moisture status is highest (depth, months): 1.3 feet (April)
Wet soil moisture status is lowest (depth, months): 3 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 6.3 inches

Content of organic matter in the upper 10 inches: 3.5 percent

Typical profile:

Ap,AB—0 to 15 inches; loam

Bw,BC—15 to 29 inches; sandy loam

2C—29 to 60 inches; stratified gravelly coarse sand to coarse sand to loamy coarse sand

Dickinson

Extent: 5 to 10 percent of the unit

Geomorphic setting: Hills on stream terraces

Position on the landform: Backslopes and summits

Slope range: 1 to 6 percent

Texture of the surface layer: Fine sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 6.1 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap,A—0 to 14 inches; fine sandy loam

Bw—14 to 39 inches; fine sandy loam

C—39 to 60 inches; loamy fine sand

Darfur

Extent: 0 to 5 percent of the unit

Geomorphic setting: Stream terraces

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (April)

Wet soil moisture status is lowest (depth, months): 2 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 8.5 inches

Content of organic matter in the upper 10 inches: 6.3 percent

Typical profile:

Ap—0 to 9 inches; loam

A,AB—9 to 19 inches; loam

Bg—19 to 31 inches; fine sandy loam

Cg—31 to 60 inches; stratified fine sand to loamy fine sand to fine sandy loam

L95E—Hawick gravelly coarse sandy loam, 12 to 25 percent slopes

Component Description

Hawick and similar soils

Extent: 70 to 90 percent of the unit

Geomorphic setting: Hills on stream terraces; hills on outwash plains

Position on the landform: Summits, shoulders, and backslopes

Slope range: 12 to 25 percent

Texture of the surface layer: Gravelly coarse sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 2.8 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap—0 to 7 inches; gravelly coarse sandy loam

AC—7 to 10 inches; gravelly loamy coarse sand

C—10 to 60 inches; gravelly coarse sand

Estherville

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on stream terraces; hills on outwash plains

Position on the landform: Backslopes and summits

Slope range: 12 to 18 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 3.5 inches

Content of organic matter in the upper 10 inches: 1.7 percent

Typical profile:

Ap—0 to 8 inches; sandy loam
 Bw—8 to 13 inches; sandy loam
 2C—13 to 60 inches; gravelly coarse sand

Tomall

Extent: 5 to 15 percent of the unit
Geomorphic setting: Stream terraces and outwash plains
Position on the landform: Swales
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium over outwash
Flooding: None
Wet soil moisture status is highest (depth, months): 4 feet (April, May)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None
Available water capacity to a depth of 60 inches: 9.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 33 inches; loam
 Bw—33 to 42 inches; sandy loam
 2Bw—42 to 47 inches; loamy coarse sand
 2C—47 to 80 inches; gravelly loamy coarse sand

L96B—Estherville-Hawick complex, 2 to 6 percent slopes***Component Description*****Estherville and similar soils**

Extent: 40 to 65 percent of the unit
Geomorphic setting: Hills on outwash plains; hills on terraces
Position on the landform: Backslopes and summits
Slope range: 2 to 6 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat excessively drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 4.1 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap,A—0 to 13 inches; sandy loam
 Bw1—13 to 18 inches; sandy loam
 2Bw2—18 to 23 inches; loamy coarse sand
 2C—23 to 60 inches; gravelly coarse sand

Hawick and similar soils

Extent: 25 to 40 percent of the unit
Geomorphic setting: Hills on outwash plains; hills on stream terraces
Position on the landform: Summits, backslopes, and shoulders
Slope range: 2 to 6 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
 Ap—0 to 7 inches; sandy loam
 Bw,C—7 to 80 inches; gravelly coarse sand

Tomall

Extent: 5 to 15 percent of the unit
Geomorphic setting: Outwash plains and stream terraces
Position on the landform: Swales
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium over outwash
Flooding: None
Wet soil moisture status is highest (depth, months): 4 feet (April, May)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, July, August, September, October, November, December)
Ponding: None

Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 33 inches; loam

Bw—33 to 42 inches; sandy loam

2Bw—42 to 47 inches; loamy coarse sand

2C—47 to 80 inches; gravelly loamy coarse sand

Biscay

Extent: 0 to 5 percent of the unit

Geomorphic setting: Outwash plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (April)

Wet soil moisture status is lowest (depth, months): 2 feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 7.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 20 inches; loam

Bg—20 to 28 inches; loam

2BCg—28 to 36 inches; gravelly loam

2Cg—36 to 60 inches; gravelly coarse sand

L97C—Hawick-Estherville complex, 6 to 12 percent slopes

Component Description

Hawick and similar soils

Extent: 45 to 70 percent of the unit

Geomorphic setting: Hills on stream terraces; hills on outwash plains

Position on the landform: Shoulders, backslopes, and summits

Slope range: 6 to 12 percent

Texture of the surface layer: Gravelly sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 2.7 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap—0 to 7 inches; gravelly sandy loam

Bw,C—7 to 80 inches; gravelly coarse sand

Estherville and similar soils

Extent: 25 to 40 percent of the unit

Geomorphic setting: Hills on stream terraces; hills on outwash plains

Position on the landform: Summits and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 4.1 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap,A—0 to 13 inches; sandy loam

Bw1—13 to 18 inches; sandy loam

2Bw2—18 to 23 inches; loamy coarse sand

2C—23 to 60 inches; gravelly coarse sand

Tomall

Extent: 5 to 15 percent of the unit

Geomorphic setting: Outwash plains and stream terraces

Position on the landform: Swales

Slope range: 0 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over outwash

Flooding: None

Wet soil moisture status is highest (depth, months): 4 feet (April, May)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, March, July, August, September, October, November, December)

Ponding: None

Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 33 inches; loam

Bw—33 to 42 inches; sandy loam

2Bw—42 to 47 inches; loamy coarse sand

2C—47 to 80 inches; gravelly loamy coarse sand

L98A—Crippin-Nicollet complex, 1 to 3 percent slopes

Component Description

Crippin and similar soils

Extent: 40 to 60 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,AB—0 to 15 inches; loam

Bw—15 to 27 inches; loam

C—27 to 60 inches; loam

Nicollet and similar soils

Extent: 30 to 45 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 17 inches; clay loam

Bw,Bg1,Bg2—17 to 33 inches; clay loam

Bg3—33 to 36 inches; clay loam

Cg—36 to 60 inches; loam

Canisteo

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Bkg—18 to 39 inches; loam

Cg—39 to 80 inches; loam

Clarion

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 14 inches; loam

Bw—14 to 33 inches; loam

Bk—33 to 60 inches; loam

L99B—Clarion-Swanlake complex, 2 to 6 percent slopes

Component Description

Clarion and similar soils

Extent: 50 to 70 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 14 inches; loam

Bw—14 to 33 inches; loam

Bk—33 to 60 inches; loam

Swanlake and similar soils

Extent: 15 to 30 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders

Slope range: 3 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.8 percent

Typical profile:

Ap—0 to 9 inches; loam

Bk—9 to 43 inches; loam

C—43 to 60 inches; loam

Nicollet

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 17 inches; clay loam

Bw,Bg1,Bg2—17 to 33 inches; clay loam

Bg3—33 to 36 inches; clay loam

Cg—36 to 60 inches; loam

Webster

Extent: 0 to 5 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 19 inches; clay loam

Bg—19 to 26 inches; clay loam

BCg,Cg—26 to 60 inches; loam

L100B—Clarion-Estherville complex, 2 to 6 percent slopes

Component Description

Clarion and similar soils

Extent: 40 to 50 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 14 inches; loam

Bw—14 to 33 inches; loam

Bk—33 to 60 inches; loam

Estherville and similar soils

Extent: 30 to 50 percent of the unit

Geomorphic setting: Hills on moraines

Slope range: 2 to 6 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 4.1 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap,A—0 to 13 inches; sandy loam

Bw1—13 to 18 inches; sandy loam

2Bw2—18 to 23 inches; loamy coarse sand

2C—23 to 60 inches; gravelly coarse sand

Lowlein

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and rises

Slope range: 0 to 2 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Outwash over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 8.8 inches

Content of organic matter in the upper 10 inches: 3.5 percent

Typical profile:

Ap,A—0 to 14 inches; sandy loam

Bw1—14 to 24 inches; sandy loam

Bw2—24 to 31 inches; loamy sand

2C—31 to 60 inches; loam

Nicollet

Extent: 5 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 17 inches; clay loam
Bw,Bg1,Bg2—17 to 33 inches; clay loam
Bg3—33 to 36 inches; clay loam
Cg—36 to 60 inches; loam

Swanlake

Extent: 5 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders

Slope range: 3 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.8 percent

Typical profile:

Ap—0 to 9 inches; loam
Bk—9 to 43 inches; loam
C—43 to 60 inches; loam

Webster

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 19 inches; clay loam
Bg—19 to 26 inches; clay loam
BCg,Cg—26 to 60 inches; clay loam, loam

L101C2—Omsrud-Hawick-Storden complex, 6 to 12 percent slopes, eroded

Component Description

Omsrud, eroded, and similar soils

Extent: 30 to 50 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.9 percent

Typical profile:

Ap—0 to 9 inches; loam
Bw—9 to 19 inches; clay loam
Bk—19 to 36 inches; loam
C—36 to 80 inches; loam

Hawick and similar soils

Extent: 25 to 35 percent of the unit

Geomorphic setting: Hills on moraines

Slope range: 6 to 12 percent

Texture of the surface layer: Gravelly sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 2.7 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap—0 to 7 inches; gravelly sandy loam
 Bw,C—7 to 80 inches; gravelly coarse sand

Storden, eroded, and similar soils

Extent: 15 to 25 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

Delft

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 37 inches; loam
 Bg—37 to 50 inches; clay loam
 Cg—50 to 60 inches; loam

Terril

Extent: 5 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

L101D2—Omsrud-Hawick-Storden complex, 12 to 18 percent slopes, eroded

Component Description**Omsrud, eroded, and similar soils**

Extent: 30 to 50 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 12 to 18 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 2.9 percent
Typical profile:
 Ap—0 to 9 inches; loam
 Bw—9 to 19 inches; clay loam
 Bk—19 to 36 inches; loam
 C—36 to 80 inches; loam

Hawick and similar soils

Extent: 25 to 35 percent of the unit
Geomorphic setting: Hills on moraines
Slope range: 12 to 18 percent
Texture of the surface layer: Gravelly coarse sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Excessively drained
Parent material: Outwash
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 2.7 inches
Content of organic matter in the upper 10 inches: 1.5 percent
Typical profile:
 Ap—0 to 7 inches; gravelly coarse sandy loam
 Bw,C—7 to 80 inches; gravelly coarse sand

Storden, eroded, and similar soils

Extent: 15 to 25 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders and backslopes
Slope range: 12 to 18 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

Ridgeton

Extent: 2 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 9 to 14 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained
Parent material: Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 23 inches; loam
 A2,AB—23 to 38 inches; loam
 Bw—38 to 50 inches; loam
 C—50 to 80 inches; loam

Delft

Extent: 2 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 37 inches; loam
 Bg—37 to 50 inches; clay loam
 Cg—50 to 60 inches; loam

Terril

Extent: 2 to 5 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 6.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

L102C2—Omsrud-Storden complex, 6 to 12 percent slopes, eroded

Component Description

Omsrud, eroded, and similar soils

Extent: 40 to 70 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.9 percent

Typical profile:

Ap—0 to 9 inches; loam

Bw—9 to 19 inches; clay loam

Bk—19 to 36 inches; loam

C—36 to 80 inches; loam

Storden, eroded, and similar soils

Extent: 20 to 30 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam

Bk—7 to 55 inches; loam

C—55 to 80 inches; loam

Omsrud

Extent: 10 to 20 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; loam

Bw—12 to 16 inches; clay loam

Bk—16 to 32 inches; loam

C—32 to 60 inches; loam

Terril

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam
A2,BA—27 to 40 inches; loam
Bw—40 to 63 inches; loam
C—63 to 80 inches; loam

Delft

Extent: 2 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 37 inches; loam
Bg—37 to 50 inches; clay loam
Cg—50 to 60 inches; loam

L102D2—Omsrud-Storden complex, 12 to 18 percent slopes, eroded

Component Description

Omsrud, eroded, and similar soils

Extent: 40 to 75 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.9 percent

Typical profile:

Ap—0 to 9 inches; loam
Bw—9 to 19 inches; clay loam
Bk—19 to 36 inches; loam
C—36 to 80 inches; loam

Storden, eroded, and similar soils

Extent: 15 to 25 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam
Bk—7 to 55 inches; loam
C—55 to 80 inches; loam

Omsrud

Extent: 10 to 25 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; loam

Bw—12 to 16 inches; clay loam
 Bk—16 to 32 inches; loam
 C—32 to 60 inches; loam

Ridgeton

Extent: 5 to 10 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 9 to 14 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 23 inches; loam
 A2,AB—23 to 38 inches; loam
 Bw—38 to 50 inches; loam
 C—50 to 80 inches; loam

Delft

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Drainageways and swales
Slope range: 1 to 3 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 37 inches; loam
 Bg—37 to 50 inches; clay loam
 Cg—50 to 60 inches; loam

Terril

Extent: 2 to 8 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

L103A—Fieldon-Canisteo complex, 0 to 2 percent slopes

Component Description

Fieldon and similar soils

Extent: 45 to 55 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats with deltaic sediments
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Deltaic sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.9 inches
Content of organic matter in the upper 10 inches: 6.5 percent

Typical profile:

Ap,A,AB—0 to 19 inches; loam
 Bg,Bw—19 to 37 inches; fine sandy loam
 C,Cg—37 to 60 inches; stratified fine sand to loamy fine sand

Canisteo and similar soils

Extent: 30 to 40 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Bkg—18 to 39 inches; loam
 Cg—39 to 80 inches; loam

Darfur

Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats with deltaic sediments
Slope range: 0 to 2 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Deltaic sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 8.5 inches
Content of organic matter in the upper 10 inches: 6.3 percent
Typical profile:
 Ap—0 to 9 inches; loam

A,AB—9 to 19 inches; loam
 Bg—19 to 31 inches; fine sandy loam
 Cg—31 to 60 inches; stratified fine sand to loamy fine sand to fine sandy loam

Glencoe

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

L105C2—Lester-Hawick complex, 6 to 12 percent slopes, eroded***Component Description*****Lester, eroded, and similar soils**

Extent: 30 to 55 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders and backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.6 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam

Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam

C—60 to 80 inches; loam

Hawick and similar soils

Extent: 25 to 45 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 6 to 12 percent

Texture of the surface layer: Gravelly sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 2.7 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap—0 to 7 inches; gravelly sandy loam

Bw,C—7 to 80 inches; gravelly coarse sand

Terril

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Hamel

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

Storden, eroded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.6 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam

Bk—7 to 55 inches; loam

C—55 to 80 inches; loam

L105D2—Lester-Hawick complex, 12 to 18 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 30 to 55 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam

Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam

C—60 to 80 inches; loam

Hawick and similar soils

Extent: 30 to 40 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Gravelly coarse sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 2.7 inches

Content of organic matter in the upper 10 inches: 1.5 percent

Typical profile:

Ap—0 to 7 inches; gravelly coarse sandy loam

Bw,C—7 to 80 inches; gravelly coarse sand

Ridgeton

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 9 to 14 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 23 inches; loam

A2,AB—23 to 38 inches; loam

Bw—38 to 50 inches; loam

C—50 to 80 inches; loam

Hamel

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

Storden, eroded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

Terril

Extent: 2 to 5 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 Ap,A1—0 to 27 inches; loam
 A2,BA—27 to 40 inches; loam
 Bw—40 to 63 inches; loam
 C—63 to 80 inches; loam

L106C2—Lester-Storden complex, 6 to 12 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 50 to 70 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and shoulders
Slope range: 6 to 12 percent
Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.6 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bt—7 to 38 inches; clay loam
 Bk—38 to 60 inches; loam
 C—60 to 80 inches; loam

Storden, eroded, and similar soils

Extent: 15 to 25 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders and backslopes
Slope range: 6 to 12 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 1.2 percent
Typical profile:
 Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

Terril

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Footslopes
Slope range: 2 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Hamel

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

Reedslake

Extent: 2 to 5 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

L106D2—Lester-Storden complex, 12 to 18 percent slopes, eroded

Component Description

Lester, eroded, and similar soils

Extent: 50 to 70 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.6 percent

Typical profile:

Ap—0 to 7 inches; loam

Bt—7 to 38 inches; clay loam

Bk—38 to 60 inches; loam

C—60 to 80 inches; loam

Storden, eroded, and similar soils

Extent: 15 to 25 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 12 to 18 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam

Bk—7 to 55 inches; loam

C—55 to 80 inches; loam

Ridgeton

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 9 to 14 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 23 inches; loam

A2,AB—23 to 38 inches; loam

Bw—38 to 50 inches; loam

C—50 to 80 inches; loam

Terril

Extent: 2 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 4 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Hamel

Extent: 0 to 6 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

L107A—Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes

Component Description

Canisteo and similar soils

Extent: 30 to 70 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and rims of depressions

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Bkg—18 to 39 inches; loam

Cg—39 to 80 inches; loam

Glencoe and similar soils

Extent: 15 to 55 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 10 inches; clay loam

A,ABg—10 to 35 inches; clay loam

Bg—35 to 48 inches; loam

Cg—48 to 60 inches; loam

Harps

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Rims of depressions

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Apk,Ak—0 to 13 inches; clay loam

Bk—13 to 30 inches; loam

Cg—30 to 60 inches; loam

Canisteo, depressional

Extent: 0 to 5 percent of the unit

Geomorphic setting: Depression on moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 17 inches; silty clay loam

Bg—17 to 30 inches; silty clay loam

2Cg—30 to 60 inches; loam

Crippin

Extent: 0 to 5 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,AB—0 to 15 inches; loam

Bw—15 to 27 inches; loam

C—27 to 60 inches; loam

L108A—Cordova-Rolfe, depressional, complex, 0 to 2 percent slopes

Component Description

Cordova and similar soils

Extent: 50 to 75 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Btg—18 to 38 inches; clay loam

Cg—38 to 80 inches; loam

Rolfe and similar soils

Extent: 15 to 35 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Glaciolacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; silt loam

E—12 to 20 inches; silt loam

Btg—20 to 35 inches; silty clay

2Bt—35 to 51 inches; clay loam

2Cg—51 to 60 inches; loam

Le Sueur

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

L109A—Marna-Barbert, depressional, complex, 0 to 2 percent slopes

Component Description

Marna and similar soils

Extent: 55 to 75 percent of the unit

Geomorphic setting: Lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 20 inches; silty clay loam
 Bg—20 to 32 inches; clay
 2Bg—32 to 41 inches; clay loam
 2Bkg—41 to 60 inches; loam

Barbert and similar soils

Extent: 20 to 35 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Silt loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
 Ap—0 to 7 inches; silt loam
 E—7 to 17 inches; silt loam
 Btg—17 to 43 inches; clay
 C—43 to 60 inches; silty clay loam

Guckeen

Extent: 0 to 10 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April, May)
Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.1 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
 Ap,A—0 to 15 inches; silty clay loam
 Bw—15 to 24 inches; silty clay loam
 2Bw—24 to 30 inches; clay loam
 2Cg—30 to 60 inches; loam

L110E—Lester-Ridgeton complex, 18 to 25 percent slopes

Component Description

Lester and similar soils

Extent: 45 to 65 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Shoulders and backslopes
Slope range: 18 to 25 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.4 inches
Content of organic matter in the upper 10 inches: 3 percent
Typical profile:
 A—0 to 5 inches; loam
 BE,Bt—5 to 34 inches; clay loam
 Bk—34 to 60 inches; loam
 C—60 to 80 inches; loam

Ridgeton and similar soils

Extent: 20 to 40 percent of the unit

Geomorphic setting: Escarpments on moraines
Position on the landform: Footslopes and backslopes
Slope range: 12 to 25 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Colluvium over till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 11.4 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
 A1,A2,A3—0 to 32 inches; loam
 Bw—32 to 40 inches; loam
 C1,C2—40 to 80 inches; loam

Cokato

Extent: 10 to 20 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Summits and backslopes
Slope range: 18 to 25 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Depth to wet soil moisture status: More than 6.7 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 A—0 to 16 inches; loam
 Bt—16 to 30 inches; clay loam
 Bk—30 to 60 inches; loam

Belview

Extent: 0 to 15 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Backslopes and shoulders
Slope range: 18 to 25 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till

Flooding: None
Depth to wet soil moisture status: More than 5 feet all year
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 3.7 percent
Typical profile:
 A—0 to 9 inches; loam
 Bk—9 to 50 inches; loam
 C—50 to 60 inches; loam

Hamel

Extent: 0 to 5 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Toeslopes
Slope range: 1 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 A1,A2—0 to 22 inches; loam
 Btg—22 to 41 inches; clay loam
 Cg—41 to 80 inches; loam

Terril

Extent: 1 to 5 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

A1,A2—0 to 24 inches; loam

AB—24 to 37 inches; loam

Bw—37 to 57 inches; loam

C—57 to 80 inches; loam

L110F—Lester-Ridgeton complex, 25 to 45 percent slopes

Component Description

Lester and similar soils

Extent: 45 to 65 percent of the unit

Geomorphic setting: Escarpments on moraines

Position on the landform: Backslopes and shoulders

Slope range: 25 to 45 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.4 inches

Content of organic matter in the upper 10 inches: 3.3 percent

Typical profile:

A—0 to 6 inches; loam

Bt—6 to 25 inches; clay loam

C—25 to 60 inches; loam

Ridgeton and similar soils

Extent: 20 to 40 percent of the unit

Geomorphic setting: Escarpments on moraines

Position on the landform: Footslopes and backslopes

Slope range: 18 to 35 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Colluvium over till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

A1,A2,A3—0 to 32 inches; loam

Bw—32 to 40 inches; loam

C1,C2—40 to 80 inches; loam

Cokato

Extent: 0 to 20 percent of the unit

Geomorphic setting: Escarpments on moraines

Position on the landform: Backslopes and summits

Slope range: 25 to 40 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.8 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

A—0 to 16 inches; loam

Bt—16 to 30 inches; clay loam

Bk—30 to 60 inches; loam

Belview

Extent: 2 to 15 percent of the unit

Geomorphic setting: Escarpments on moraines

Position on the landform: Backslopes and shoulders

Slope range: 25 to 45 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 3.7 percent

Typical profile:

A—0 to 9 inches; loam

Bk—9 to 50 inches; loam

C—50 to 60 inches; loam

Terril

Extent: 1 to 5 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Footslopes
Slope range: 4 to 6 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 11.3 inches
Content of organic matter in the upper 10 inches: 4 percent
Typical profile:
 A1,A2—0 to 24 inches; loam
 AB—24 to 37 inches; loam
 Bw—37 to 57 inches; loam
 C—57 to 80 inches; loam

Hamel

Extent: 0 to 3 percent of the unit
Geomorphic setting: Escarpments on moraines
Position on the landform: Toeslopes
Slope range: 1 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Colluvium over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 A1,A2—0 to 22 inches; loam
 Btg—22 to 41 inches; clay loam
 Cg—41 to 80 inches; loam

L111A—Nicollet silty clay loam, 1 to 3 percent slopes**Component Description****Nicollet and similar soils**

Extent: 70 to 90 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap—0 to 10 inches; silty clay loam
 Bw—10 to 31 inches; clay loam
 Bk—31 to 42 inches; loam
 C—42 to 80 inches; loam

Clarion

Extent: 0 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and summits
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September, October, December)
Ponding: None
Available water capacity to a depth of 60 inches: 10.9 inches
Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 14 inches; loam
 Bw—14 to 33 inches; loam
 Bk—33 to 60 inches; loam

Webster

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):
 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A,AB—0 to 24 inches; silty clay loam
 Bg—24 to 45 inches; clay loam
 Cg—45 to 80 inches; loam

L112A—Webster silty clay loam, 0 to 2 percent slopes

Component Description

Webster and similar soils

Extent: 75 to 90 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):
 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A,AB—0 to 24 inches; silty clay loam
 Bg—24 to 45 inches; clay loam
 Cg—45 to 80 inches; loam

Glencoe

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.2 inches

Content of organic matter in the upper 10 inches: 7.5 percent

Typical profile:

Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

Nicollet

Extent: 0 to 10 percent of the unit

Geomorphic setting: Lake plains and moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):
 1.5 feet (April)

Wet soil moisture status is lowest (depth, months):
 More than 6.7 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap—0 to 10 inches; silty clay loam

Bw—10 to 31 inches; clay loam

Bk—31 to 42 inches; loam

C—42 to 80 inches; loam

L113B—Reedslake loam, 2 to 5 percent slopes

Component Description

Reedslake and similar soils

Extent: 65 to 80 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Summits and backslopes

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

Le Sueur

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

Reedslake, eroded

Extent: 5 to 15 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

Cordova

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7
inches

Content of organic matter in the upper 10 inches: 5.5
percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Btg—18 to 38 inches; clay loam

Cg—38 to 80 inches; loam

L114A—Hanlon fine sandy loam, 0 to 3 percent slopes, rarely flooded

Component Description

Hanlon, rarely flooded, and similar soils

Extent: 70 to 95 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Fine sandy loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Moderately well drained

Parent material: Alluvium

Flooding does not occur (months): January, February,
July, August, September, October, November,
December

Flooding is most likely (frequency, months): Rare
(March, April, May, June)

Wet soil moisture status is highest (depth, months):
2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 9.9
inches

Content of organic matter in the upper 10 inches: 2.5
percent

Typical profile:

A—0 to 24 inches; fine sandy loam

AB—24 to 52 inches; fine sandy loam

Bw1—52 to 57 inches; fine sandy loam

Bw2,C—57 to 80 inches; stratified fine sand to
loamy fine sand to fine sandy loam

Coland, occasionally flooded

Extent: 5 to 15 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February,
September, October, November, December

Flooding is most likely (frequency, months):

Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 12.2
inches

Content of organic matter in the upper 10 inches: 6
percent

Typical profile:

Ap,A—0 to 25 inches; silty clay loam

AC,Cg1—25 to 54 inches; loam

Cg2—54 to 60 inches; sandy loam

Minneopa, rarely flooded

Extent: 5 to 10 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Moderately well drained

Parent material: Alluvium

Flooding does not occur (months): January, February,
July, August, September, October, November,
December

Flooding is most likely (frequency, months): Rare
(March, April, May, June)

Wet soil moisture status is highest (depth, months):
2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 5.3
inches

Content of organic matter in the upper 10 inches: 4
percent

Typical profile:

Ap,A—0 to 15 inches; sandy loam

Bw—15 to 20 inches; sandy loam

BC,C—20 to 60 inches; loamy sand

L115A—Brownton-Lura, depressional, complex, 0 to 2 percent slopes

Component Description

Brownton and similar soils

Extent: 50 to 60 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Flats and rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 22 inches; silty clay loam
 Bg—22 to 38 inches; silty clay
 2Cg—38 to 60 inches; loam

Lura and similar soils

Extent: 30 to 40 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Silty clay
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 9.6 inches
Content of organic matter in the upper 10 inches: 8 percent

Typical profile:

Ap—0 to 10 inches; silty clay
 A—10 to 58 inches; clay
 Bg—58 to 72 inches; silty clay

Marna

Extent: 5 to 15 percent of the unit
Geomorphic setting: Lake plains and moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 20 inches; silty clay loam
 Bg—20 to 32 inches; clay
 2Bg—32 to 41 inches; clay loam
 2Bkg—41 to 60 inches; loam

L116A—Le Sueur-Lerdal complex, 1 to 3 percent slopes

Component Description

Le Sueur and similar soils

Extent: 35 to 55 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

Lerdal and similar soils

Extent: 30 to 50 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.6 feet (November)

Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches

Content of organic matter in the upper 10 inches: 2.6 percent

Typical profile:

Ap—0 to 8 inches; clay loam

E—8 to 12 inches; clay loam

Bt,Btg—12 to 41 inches; silty clay loam

Bk—41 to 80 inches; loam

Mazaska

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: More than 60 inches

Drainage class: Poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 15 inches; silty clay loam

Btg—15 to 42 inches; clay

Bkg—42 to 80 inches; loam

Kilkenny

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and summits

Slope range: 2 to 6 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.7 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap—0 to 11 inches; clay loam

Bt—11 to 35 inches; clay loam

2Bk,2C—35 to 80 inches; loam

L117C2—Omsrud loam, 6 to 12 percent slopes, eroded

Component Description

Omsrud, eroded, and similar soils

Extent: 55 to 75 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 2.9 percent

Typical profile:

Ap—0 to 9 inches; loam

Bw—9 to 19 inches; clay loam

Bk—19 to 36 inches; loam

C—36 to 80 inches; loam

Omsrud

Extent: 5 to 20 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; loam

Bw—12 to 16 inches; clay loam

Bk—16 to 32 inches; loam

C—32 to 60 inches; loam

Terril

Extent: 5 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 4 to 8 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Delft

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 37 inches; loam

Bg—37 to 50 inches; clay loam

Cg—50 to 60 inches; loam

Storden, eroded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and shoulders

Slope range: 6 to 12 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Depth to wet soil moisture status: More than 6.7 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.2 percent

Typical profile:

Ap—0 to 7 inches; loam
 Bk—7 to 55 inches; loam
 C—55 to 80 inches; loam

L118A—Rushriver fine sandy loam, 0 to 1 percent slopes, frequently flooded

Component Description

Rushriver, frequently flooded, and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Flood plains
Slope range: 0 to 1 percent
Texture of the surface layer: Stratified sandy loam to fine sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Flooding does not occur (months): January, February, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status is highest (depth, months): At the surface (April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding: None
Available water capacity to a depth of 60 inches: 7.8 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
 A—0 to 41 inches; stratified sandy loam to fine sandy loam
 C—41 to 80 inches; stratified fine sand to loamy very fine sand to silt loam

Houghton, frequently flooded

Extent: 0 to 10 percent of the unit
Geomorphic setting: Flood plains
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material
Flooding does not occur (months): January, February, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status: At the surface all year

Ponding: None

Available water capacity to a depth of 60 inches: 23.9 inches

Content of organic matter in the upper 10 inches: 84.5 percent

Typical profile:

Oa—0 to 60 inches; muck

Klossner, frequently flooded

Extent: 0 to 10 percent of the unit
Geomorphic setting: Flood plains
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over loamy till
Flooding does not occur (months): January, February, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status: At the surface all year
Ponding: None
Available water capacity to a depth of 60 inches: 17.7 inches
Content of organic matter in the upper 10 inches: 42.5 percent
Typical profile:
 Oa—0 to 22 inches; muck
 2A1—22 to 45 inches; mucky silt loam
 2A2—45 to 60 inches; silt loam

Medo, frequently flooded

Extent: 0 to 10 percent of the unit
Geomorphic setting: Flood plains
Slope range: 0 to 1 percent
Texture of the surface layer: Muck
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Organic material over sandy deposits
Flooding does not occur (months): January, February, September, October, November, December
Flooding is most likely (frequency, months): Frequent (March, April, May, June)
Wet soil moisture status: At the surface all year
Ponding: None
Available water capacity to a depth of 60 inches: 14.5 inches
Content of organic matter in the upper 10 inches: 35 percent
Typical profile:
 Oa—0 to 25 inches; muck

2A—25 to 31 inches; mucky silt loam
 2Bg—31 to 45 inches; silt loam
 2Cg—45 to 80 inches; gravelly coarse sand

L119B—Angus loam, 2 to 5 percent slopes

Component Description

Angus and similar soils

Extent: 50 to 90 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Summits and backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 2.5 percent
Typical profile:
 Ap—0 to 8 inches; loam
 Bt—8 to 35 inches; clay loam
 BC—35 to 40 inches; clay loam
 C—40 to 80 inches; loam

Angus, eroded

Extent: 5 to 40 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Shoulders
Slope range: 2 to 5 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)
Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 1.8 percent

Typical profile:

Ap—0 to 8 inches; clay loam
 Bt—8 to 40 inches; clay loam
 Bk—40 to 60 inches; loam

Cordova

Extent: 0 to 10 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.7 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 18 inches; clay loam
 Btg—18 to 38 inches; clay loam
 Cg—38 to 80 inches; loam

Le Sueur

Extent: 5 to 15 percent of the unit
Geomorphic setting: Moraines
Position on the landform: Flats and slight rises
Slope range: 1 to 3 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Somewhat poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): 1.5 feet (April)
Wet soil moisture status is lowest (depth, months): 5.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam
 Bt—17 to 37 inches; clay loam
 Bk—37 to 46 inches; loam
 C—46 to 80 inches; loam

L120A—Good Thunder silty clay loam, 0 to 3 percent slopes

Component Description

Good Thunder and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 2.5 feet (April, May)
Wet soil moisture status is lowest (depth, months): 5.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.6 inches
Content of organic matter in the upper 10 inches: 5.5 percent
Typical profile:
 Ap,A—0 to 15 inches; silty clay loam
 Bt—15 to 32 inches; silty clay
 C—32 to 80 inches; silt loam

Ocheyedan

Extent: 5 to 15 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Backslopes and summits
Slope range: 2 to 4 percent
Texture of the surface layer: Loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Loamy and silty sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)
Wet soil moisture status is lowest (depth, months): More than 5 feet (January, February, July, August, September, October, December)
Ponding: None

Available water capacity to a depth of 60 inches: 11.5 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap—0 to 10 inches; loam
 Bw1,Bw2—10 to 30 inches; loam
 2C1,2C2—30 to 60 inches; stratified loam to silt loam

Minnetonka

Extent: 5 to 15 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Flats and swales
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.5 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.8 inches
Content of organic matter in the upper 10 inches: 5 percent
Typical profile:
 Ap,A—0 to 13 inches; silty clay loam
 Btg—13 to 35 inches; silty clay
 Cg—35 to 60 inches; silty clay loam

L121B—Clarion clay loam, 2 to 5 percent slopes

Component Description

Clarion and similar soils

Extent: 70 to 90 percent of the unit
Geomorphic setting: Hills on moraines
Position on the landform: Summits and backslopes
Slope range: 2 to 5 percent
Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Well drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.9 inches

Content of organic matter in the upper 10 inches: 4.5 percent

Typical profile:

Ap,A—0 to 13 inches; clay loam

Bw—13 to 37 inches; clay loam

C—37 to 80 inches; loam

Guckeen

Extent: 10 to 20 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 0 to 5 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):

1.5 feet (April, May)

Wet soil moisture status is lowest (depth, months): 4.9

feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.1 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,A—0 to 15 inches; silty clay loam

Bw—15 to 24 inches; silty clay loam

2Bw—24 to 30 inches; clay loam

2Cg—30 to 60 inches; loam

Marna

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines and lake plains

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Lacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):

0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6

feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 20 inches; silty clay loam

Bg—20 to 32 inches; clay

2Bg—32 to 41 inches; clay loam

2Bkg—41 to 60 inches; loam

L122B—Reedslake-Estherville complex, 2 to 6 percent slopes

Component Description

Reedslake and similar soils

Extent: 45 to 65 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Backslopes and summits

Slope range: 2 to 5 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Well drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):

3.6 feet (April)

Wet soil moisture status is lowest (depth, months):

More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 10.6 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap—0 to 12 inches; loam

Bt—12 to 26 inches; clay loam

Bk—26 to 48 inches; loam

C—48 to 80 inches; loam

Estherville and similar soils

Extent: 15 to 40 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Shoulders and backslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat excessively drained

Parent material: Outwash

Flooding: None

Depth to wet soil moisture status: More than 5 feet all year

Ponding: None

Available water capacity to a depth of 60 inches: 4.1 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

Ap,A—0 to 13 inches; sandy loam

Bw1—13 to 18 inches; sandy loam

2Bw2—18 to 23 inches; loamy coarse sand

2C—23 to 60 inches; gravelly coarse sand

Le Sueur

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.5 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,AB—0 to 17 inches; clay loam

Bt—17 to 37 inches; clay loam

Bk—37 to 46 inches; loam

C—46 to 80 inches; loam

Cordova

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Btg—18 to 38 inches; clay loam

Cg—38 to 80 inches; loam

Lowlein

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and rises

Slope range: 0 to 2 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Outwash over till

Flooding: None

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 8.8 inches

Content of organic matter in the upper 10 inches: 3.5 percent

Typical profile:

Ap,A—0 to 14 inches; sandy loam

Bw1—14 to 24 inches; sandy loam

Bw2—24 to 31 inches; loamy sand

2C—31 to 60 inches; loam

L123A—Belleville sandy loam, 0 to 2 percent slopes

Component Description

Belleville and similar soils

Extent: 80 to 95 percent of the unit

Geomorphic setting: Beaches on moraines

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Glaciolacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 2
feet (August)

Ponding: None

Available water capacity to a depth of 60 inches: 8.4
inches

Content of organic matter in the upper 10 inches: 4.5
percent

Typical profile:

Ap—0 to 11 inches; sandy loam

Bg—11 to 27 inches; loamy sand

2Bg—27 to 48 inches; loam

2Cg—48 to 80 inches; loam

Granby

Extent: 10 to 20 percent of the unit

Geomorphic setting: Beaches on moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Loamy fine sand

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Outwash

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April, May, June)

Wet soil moisture status is lowest (depth, months): 1.8
feet (August)

Ponding is shallowest (depth, months): 0.5 foot (June)

Ponding is deepest (depth, months): 1 foot (March,
April, May)

Available water capacity to a depth of 60 inches: 4.9
inches

Content of organic matter in the upper 10 inches: 7
percent

Typical profile:

Ap—0 to 12 inches; loamy fine sand

AC—12 to 24 inches; fine sand

C—24 to 60 inches; loamy fine sand

L124A—Glencoe mucky clay loam, depressional, 0 to 1 percent slopes

Component Description

Glencoe mucky clay loam and similar soils

Extent: 80 to 90 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Mucky clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Very poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months): At
the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2
feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot
(March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 11.4
inches

Content of organic matter in the upper 10 inches: 14
percent

Typical profile:

Ap—0 to 10 inches; mucky clay loam

A—10 to 29 inches; clay loam

Bg—29 to 42 inches; loam

Cg—42 to 60 inches; loam

Canisteo

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and rims

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60
inches)

Drainage class: Poorly drained

Parent material: Till

Flooding: None

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3
feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.7
inches

Content of organic matter in the upper 10 inches: 5.5
percent

Typical profile:

Ap,A—0 to 18 inches; clay loam

Bkg—18 to 39 inches; loam

Cg—39 to 80 inches; loam

Glencoe clay loam

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 11.2 inches
Content of organic matter in the upper 10 inches: 7.5 percent
Typical profile:
 Ap—0 to 10 inches; clay loam
 A,ABg—10 to 35 inches; clay loam
 Bg—35 to 48 inches; loam
 Cg—48 to 60 inches; loam

L125A—Hanlon, rarely flooded-Coland, occasionally flooded, complex, 0 to 3 percent slopes

Component Description

Hanlon, rarely flooded, and similar soils

Extent: 35 to 65 percent of the unit
Geomorphic setting: Flood plains
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Fine sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Flooding does not occur (months): January, February, July, August, September, October, November, December
Flooding is most likely (frequency, months): Rare (March, April, May, June)
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 9.9 inches
Content of organic matter in the upper 10 inches: 2.5 percent

Typical profile:

A—0 to 24 inches; fine sandy loam
 AB—24 to 52 inches; fine sandy loam
 Bw1—52 to 57 inches; fine sandy loam
 Bw2,C—57 to 80 inches; stratified fine sand to loamy fine sand to fine sandy loam

Coland, occasionally flooded, and similar soils

Extent: 25 to 40 percent of the unit
Geomorphic setting: Flood plains
Position on the landform: Flats
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Alluvium
Flooding does not occur (months): January, February, September, October, November, December
Flooding is most likely (frequency, months): Occasional (March, April, May, June, July, August)
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 12.2 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 25 inches; silty clay loam
 AC,Cg1—25 to 54 inches; loam
 Cg2—54 to 60 inches; sandy loam

Minneopa, rarely flooded

Extent: 10 to 25 percent of the unit
Geomorphic setting: Flood plains
Position on the landform: Flats and slight rises
Slope range: 0 to 3 percent
Texture of the surface layer: Sandy loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Moderately well drained
Parent material: Alluvium
Flooding does not occur (months): January, February, July, August, September, October, November, December
Flooding is most likely (frequency, months): Rare (March, April, May, June)
Wet soil moisture status is highest (depth, months): 2.5 feet (April)
Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 5.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 15 inches; sandy loam

Bw—15 to 20 inches; sandy loam

BC,C—20 to 60 inches; loamy sand

L126A—Coland silty clay loam, 0 to 2 percent slopes, occasionally flooded

Component Description

Coland, occasionally flooded, and similar soils

Extent: 65 to 90 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months): Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 12.2 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 25 inches; silty clay loam

AC,Cg1—25 to 54 inches; loam

Cg2—54 to 60 inches; sandy loam

Minneopa, occasionally flooded

Extent: 0 to 15 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats and slight rises

Slope range: 0 to 3 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Alluvium

Flooding does not occur (months): January, February, July, August, September, October, November, December

Flooding is most likely (frequency, months):

Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months): 2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 5.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 15 inches; sandy loam

Bw—15 to 20 inches; sandy loam

BC,C—20 to 60 inches; loamy sand

Havelock, occasionally flooded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months): Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.1 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 23 inches; clay loam

Bg—23 to 35 inches; clay loam

Cg—35 to 60 inches; stratified loam to silt loam to clay loam

Spillville, occasionally flooded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats and slight rises

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months):
Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months):
1.5 feet (April)

Wet soil moisture status is lowest (depth, months):
More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

Ap,A—0 to 51 inches; loam

C—51 to 60 inches; loam

L127A—Coland silty clay loam, channeled, 0 to 2 percent slopes, frequently flooded

Component Description

Coland, frequently flooded, and similar soils

Extent: 65 to 90 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months): Frequent (March, April, May, June)

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 12.3 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

A1—0 to 12 inches; silty clay loam

A2—12 to 30 inches; loam

A3—30 to 55 inches; stratified fine sandy loam to loam

AB,Bg—55 to 80 inches; fine sandy loam

Minneopa, occasionally flooded

Extent: 0 to 15 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Rises

Slope range: 0 to 3 percent

Texture of the surface layer: Sandy loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Alluvium

Flooding does not occur (months): January, February, July, August, September, October, November, December

Flooding is most likely (frequency, months):
Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months):
2.5 feet (April)

Wet soil moisture status is lowest (depth, months): 3.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 5.6 inches

Content of organic matter in the upper 10 inches: 3 percent

Typical profile:

A—0 to 16 inches; sandy loam

Bw—16 to 29 inches; loamy sand

C—29 to 60 inches; sand

Havelock, frequently flooded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats

Slope range: 0 to 2 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months): Frequent (March, April, May, June)

Wet soil moisture status is highest (depth, months):
0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

A,Bg1—0 to 30 inches; silt loam

Bg2—30 to 40 inches; loam

Cg—40 to 60 inches; stratified loam to silt loam to clay loam

Spillville, occasionally flooded

Extent: 0 to 10 percent of the unit

Geomorphic setting: Flood plains

Position on the landform: Flats and slight rises

Slope range: 0 to 2 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Alluvium

Flooding does not occur (months): January, February, September, October, November, December

Flooding is most likely (frequency, months):

Occasional (March, April, May, June, July, August)

Wet soil moisture status is highest (depth, months): 1.5 feet (April)

Wet soil moisture status is lowest (depth, months): More than 5 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.7 inches

Content of organic matter in the upper 10 inches: 5 percent

Typical profile:

A—0 to 51 inches; loam

C—51 to 60 inches; loam

L128A—Mazaska-Rolfe, depressional, complex, 0 to 2 percent slopes

Component Description

Mazaska and similar soils

Extent: 50 to 70 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and swales

Slope range: 0 to 2 percent

Texture of the surface layer: Silty clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)

Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 9.5 inches

Content of organic matter in the upper 10 inches: 5.5 percent

Typical profile:

Ap,A—0 to 15 inches; silty clay loam

Btg—15 to 42 inches; clay

Bkg—42 to 80 inches; loam

Rolfe and similar soils

Extent: 20 to 35 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Depressions

Slope range: 0 to 1 percent

Texture of the surface layer: Silt loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Very poorly drained

Parent material: Glaciolacustrine sediments over till

Flooding: None

Wet soil moisture status is highest (depth, months): At the surface (March, April)

Wet soil moisture status is lowest (depth, months): 2 feet (February, August)

Ponding is shallowest (depth, months): 0.5 foot (March)

Ponding is deepest (depth, months): 1 foot (April)

Available water capacity to a depth of 60 inches: 10.3 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A—0 to 12 inches; silt loam

E—12 to 20 inches; silt loam

Btg—20 to 35 inches; silty clay

2Bt—35 to 51 inches; clay loam

2Cg—51 to 60 inches; loam

Lerdal

Extent: 5 to 15 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Flats and slight rises

Slope range: 1 to 3 percent

Texture of the surface layer: Clay loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Somewhat poorly drained

Parent material: Glaciofluvial sediments and reworked till over till

Flooding: None

Wet soil moisture status is highest (depth, months): 1.6 feet (November)

Wet soil moisture status is lowest (depth, months): 4.9 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 10.2 inches

Content of organic matter in the upper 10 inches: 2.6 percent

Typical profile:

Ap—0 to 8 inches; clay loam

E—8 to 12 inches; clay loam

Bt,Btg—12 to 41 inches; silty clay loam

Bk—41 to 80 inches; loam

L129B—Terril loam, 2 to 6 percent slopes

Component Description

Terril and similar soils

Extent: 80 to 95 percent of the unit

Geomorphic setting: Hills on moraines

Position on the landform: Footslopes

Slope range: 2 to 6 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Moderately well drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 3.6 feet (April)

Wet soil moisture status is lowest (depth, months): More than 6.7 feet (January, February, July, August, September)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 4 percent

Typical profile:

Ap,A1—0 to 27 inches; loam

A2,BA—27 to 40 inches; loam

Bw—40 to 63 inches; loam

C—63 to 80 inches; loam

Delft

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.4 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A—0 to 37 inches; loam

Bg—37 to 50 inches; clay loam

Cg—50 to 60 inches; loam

Hamel

Extent: 0 to 10 percent of the unit

Geomorphic setting: Moraines

Position on the landform: Drainageways and swales

Slope range: 1 to 3 percent

Texture of the surface layer: Loam

Depth to restrictive feature: Very deep (more than 60 inches)

Drainage class: Poorly drained

Parent material: Colluvium over till

Flooding: None

Wet soil moisture status is highest (depth, months): 0.5 foot (April)

Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)

Ponding: None

Available water capacity to a depth of 60 inches: 11.6 inches

Content of organic matter in the upper 10 inches: 6 percent

Typical profile:

Ap,A,AB—0 to 24 inches; loam

Btg—24 to 46 inches; clay loam

Cg—46 to 80 inches; loam

L130A—Okoboji mucky silty clay loam, depressional, 0 to 1 percent slopes

Component Description

Okoboji mucky silty clay loam and similar soils

Extent: 60 to 85 percent of the unit

Geomorphic setting: Moraines and lake plains

Position on the landform: Depressions

Slope range: 0 to 1 percent
Texture of the surface layer: Mucky silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (February, August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 12 inches
Content of organic matter in the upper 10 inches: 14 percent
Typical profile:
 Ap,A—0 to 13 inches; mucky silty clay loam
 A—13 to 35 inches; silty clay loam
 Bg—35 to 60 inches; silty clay loam

Okoboji silty clay loam

Extent: 10 to 20 percent of the unit
Geomorphic setting: Moraines and lake plains
Position on the landform: Depressions
Slope range: 0 to 1 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Very poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): At the surface (March, April)
Wet soil moisture status is lowest (depth, months): 2 feet (August)
Ponding is shallowest (depth, months): 0.5 foot (March)
Ponding is deepest (depth, months): 1 foot (April)
Available water capacity to a depth of 60 inches: 12.1 inches
Content of organic matter in the upper 10 inches: 7.7 percent
Typical profile:
 Ap,A—0 to 26 inches; silty clay loam
 Bg—26 to 42 inches; silty clay
 Cg—42 to 60 inches; silty clay loam

Brownton

Extent: 5 to 10 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Rims of depressions

Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments over till
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April, May)
Wet soil moisture status is lowest (depth, months): 2.6 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 10.5 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A,AB—0 to 22 inches; silty clay loam
 Bg—22 to 38 inches; silty clay
 2Cg—38 to 60 inches; loam

Spicer

Extent: 0 to 10 percent of the unit
Geomorphic setting: Lake plains
Position on the landform: Rims of depressions
Slope range: 0 to 2 percent
Texture of the surface layer: Silty clay loam
Depth to restrictive feature: Very deep (more than 60 inches)
Drainage class: Poorly drained
Parent material: Lacustrine sediments
Flooding: None
Wet soil moisture status is highest (depth, months): 0.5 foot (April)
Wet soil moisture status is lowest (depth, months): 3.3 feet (February, August)
Ponding: None
Available water capacity to a depth of 60 inches: 11.7 inches
Content of organic matter in the upper 10 inches: 6 percent
Typical profile:
 Ap,A—0 to 16 inches; silty clay loam
 Bg,BCg—16 to 40 inches; silt loam
 Cg—40 to 60 inches; silt loam

M-W—Water, miscellaneous

Component Description

- This map unit consists of bodies of water that have been constructed, including sewage lagoons, storm-water sediment basins with a permanent pool of water, and aquaculture ponds.

U3B—Udorthents, loamy (cut and fill land), 0 to 6 percent slopes

Component Description

Udorthents (cut and fill land)

Extent: 100 percent of the unit

Geomorphic setting: Moraines

Slope range: 0 to 6 percent

Parent material: Variable loamy material

Flooding: None

General description: Udorthents consist primarily of areas that have been cut for leveling or filled for development. The cut and/or fill material is

dominantly loamy soil material. As much as 30 percent of this map unit is covered by impervious surfaces. Most of the areas have been disturbed by construction activity. Because of the variability of this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

W—Water

Component Description

- This map unit consists of naturally occurring bodies of water.

Table 2.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
GP	Pits, gravel-Udipsamments complex-----	126	*
L5A	Delft, overwash-Delft complex, 1 to 4 percent slopes-----	3,817	1.4
L13A	Klossner muck, depressional, 0 to 1 percent slopes-----	3,447	1.2
L14A	Houghton muck, depressional, 0 to 1 percent slopes-----	2,987	1.1
L15A	Klossner, Okoboji, and Glencoe soils, ponded, 0 to 1 percent slopes-----	1,524	0.6
L16A	Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes---	7,184	2.6
L26B	Shorewood silty clay loam, 3 to 6 percent slopes-----	143	*
L36A	Hamel, overwash-Hamel complex, 1 to 4 percent slopes-----	8,099	2.9
L40B	Angus-Kilkenny complex, 2 to 6 percent slopes-----	6,354	2.3
L41C2	Lester-Kilkenny complex, 6 to 12 percent slopes, eroded-----	4,163	1.5
L41D2	Lester-Kilkenny complex, 12 to 18 percent slopes, eroded-----	1,287	0.5
L41E	Lester-Kilkenny complex, 18 to 25 percent slopes-----	486	0.2
L48A	Derrynane, overwash-Derrynane complex, 1 to 4 percent slopes-----	2,972	1.1
L49A	Klossner soils, depressional, 0 to 1 percent slopes-----	373	0.1
L50A	Houghton and Muskego soils, depressional, 0 to 1 percent slopes-----	1,827	0.7
L51C2	Gladek silt loam, 6 to 12 percent slopes, eroded-----	104	*
L56A	Muskego and Klossner soils, 0 to 1 percent slopes, frequently flooded----	141	*
L57A	Medo muck, depressional, 0 to 1 percent slopes-----	68	*
L63A	Klossner muck, lake plain, depressional, 0 to 1 percent slopes-----	313	0.1
L64A	Tadkee-Tadkee, depressional, complex, 0 to 2 percent slopes-----	520	0.2
L73A	Blue Earth mucky silty clay loam, depressional, 0 to 1 percent slopes----	272	*
L74A	Estherville sandy loam, terrace, 0 to 2 percent slopes-----	3	*
L75B	Barrington silt loam, 2 to 6 percent slopes-----	342	0.1
L76B	Dickinson fine sandy loam, 1 to 6 percent slopes-----	496	0.2
L77A	Brownton silty clay loam, 0 to 2 percent slopes-----	319	0.1
L78A	Canisteo clay loam, 0 to 2 percent slopes-----	2,341	0.8
L79B	Clarion loam, 2 to 5 percent slopes-----	12,373	4.5
L80C2	Lester loam, 6 to 12 percent slopes, eroded-----	10,209	3.7
L80D2	Lester loam, 12 to 18 percent slopes, eroded-----	2,772	1.0
L81A	Cordova clay loam, 0 to 2 percent slopes-----	12,707	4.6
L82A	Marna silty clay loam, 0 to 2 percent slopes-----	14,784	5.3
L83A	Webster clay loam, 0 to 2 percent slopes-----	20,603	7.4
L84A	Glencoe clay loam, depressional, 0 to 1 percent slopes-----	7,624	2.8
L85A	Nicollet clay loam, 1 to 3 percent slopes-----	13,962	5.0
L86A	Madelia silty clay loam, 0 to 2 percent slopes-----	399	0.1
L87A	Kingston silty clay loam, 1 to 3 percent slopes-----	275	*
L88A	Lura silty clay, depressional, 0 to 1 percent slopes-----	494	0.2
L89A	Guckeen silty clay loam, 0 to 3 percent slopes-----	3,191	1.2
L90A	Le Sueur clay loam, 0 to 3 percent slopes-----	16,246	5.9

See footnote at end of table.

Table 2.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
L91A	Mazaska silty clay loam, 0 to 2 percent slopes-----	3,259	1.2
L92A	Darfur loam, 0 to 2 percent slopes-----	271	*
L93A	Muskego muck, depressional, 0 to 1 percent slopes-----	3,791	1.4
L94A	Lowlein fine sandy loam, terrace, 0 to 3 percent slopes-----	277	0.1
L95E	Hawick gravelly coarse sandy loam, 12 to 25 percent slopes-----	33	*
L96B	Estherville-Hawick complex, 2 to 6 percent slopes-----	204	*
L97C	Hawick-Estherville complex, 6 to 12 percent slopes-----	197	*
L98A	Crippin-Nicollet complex, 1 to 3 percent slopes-----	609	0.2
L99B	Clarion-Swanlake complex, 2 to 6 percent slopes-----	367	0.1
L100B	Clarion-Estherville complex, 2 to 6 percent slopes-----	1,703	0.6
L101C2	Omsrud-Hawick-Storden complex, 6 to 12 percent slopes, eroded-----	1,150	0.4
L101D2	Omsrud-Hawick-Storden complex, 12 to 18 percent slopes, eroded-----	164	*
L102C2	Omsrud-Storden complex, 6 to 12 percent slopes, eroded-----	1,353	0.5
L102D2	Omsrud-Storden complex, 12 to 18 percent slopes, eroded-----	546	0.2
L103A	Fieldon-Canisteo complex, 0 to 2 percent slopes-----	404	0.1
L105C2	Lester-Hawick complex, 6 to 12 percent slopes, eroded-----	1,441	0.5
L105D2	Lester-Hawick complex, 12 to 18 percent slopes, eroded-----	561	0.2
L106C2	Lester-Storden complex, 6 to 12 percent slopes, eroded-----	46	*
L106D2	Lester-Storden complex, 12 to 18 percent slopes, eroded-----	6	*
L107A	Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes-----	28,707	10.4
L108A	Cordova-Rolfe, depressional, complex, 0 to 2 percent slopes-----	3,060	1.1
L109A	Marna-Barbert, depressional, complex, 0 to 2 percent slopes-----	1,731	0.6
L110E	Lester-Ridgeton complex, 18 to 25 percent slopes-----	934	0.3
L110F	Lester-Ridgeton complex, 25 to 45 percent slopes-----	696	0.3
L111A	Nicollet silty clay loam, 1 to 3 percent slopes-----	2,906	1.0
L112A	Webster silty clay loam, 0 to 2 percent slopes-----	6,435	2.3
L113B	Reedslake loam, 2 to 5 percent slopes-----	19,730	7.1
L114A	Hanlon fine sandy loam, 0 to 3 percent slopes, rarely flooded-----	195	*
L115A	Brownton-Lura, depressional, complex, 0 to 2 percent slopes-----	2,497	0.9
L116A	Le Sueur-Lerdal complex, 1 to 3 percent slopes-----	3,946	1.4
L117C2	Omsrud loam, 6 to 12 percent slopes, eroded-----	3,174	1.1
L118A	Rushriver fine sandy loam, 0 to 1 percent slopes, frequently flooded-----	2	*
L119B	Angus loam, 2 to 5 percent slopes-----	51	*
L120A	Good Thunder silty clay loam, 0 to 3 percent slopes-----	156	*
L121B	Clarion clay loam, 2 to 5 percent slopes-----	1,811	0.7
L122B	Reedslake-Estherville complex, 2 to 6 percent slopes-----	1,600	0.6
L123A	Belleville sandy loam, 0 to 2 percent slopes-----	249	*
L124A	Glencoe mucky clay loam, depressional, 0 to 1 percent slopes-----	343	0.1
L125A	Hanlon, rarely flooded-Coland, occasionally flooded, complex, 0 to 3 percent slopes-----	996	0.4
L126A	Coland silty clay loam, 0 to 2 percent slopes, occasionally flooded-----	3,266	1.2
L127A	Coland silty clay loam, channeled, 0 to 2 percent slopes, frequently flooded-----	3,190	1.2
L128A	Mazaska-Rolfe, depressional, complex, 0 to 2 percent slopes-----	1,211	0.4
L129B	Terril loam, 2 to 6 percent slopes-----	2,591	0.9
L130A	Okoboji mucky silty clay loam, depressional, 0 to 1 percent slopes-----	67	*
M-W	Water, miscellaneous-----	97	*
U3B	Udorthents, loamy (cut and fill land), 0 to 6 percent slopes-----	563	0.2
W	Water-----	5,067	1.8
	Total-----	277,000	100.0

* Less than 0.1 percent.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as sites for buildings, highways and other transportation systems, and parks and other recreational facilities; as sites for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *well suited*, *moderately suited*, *poorly suited*, and *unsuited* or as *good*, *fair*, *poor*, and *very poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Agronomy

General management needed for crops and for hay and pasture is suggested in this section. The system of land capability classification used by the Natural Resources Conservation Service is explained, the estimated yields of the main crops and hay and pasture plants are listed, prime farmland is defined, and considerations affecting windbreaks and environmental plantings are described. Planners of management systems for individual fields or farms should consider obtaining specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Cropland Management Considerations

The management concerns affecting the use of the soil map units in the survey area for crops are shown

in table 3. The main concerns in managing nonirrigated cropland are conserving moisture, controlling wind erosion and water erosion, and maintaining soil fertility.

Conserving moisture consists primarily of reducing the evaporation and runoff rates and increasing the water infiltration rate. Applying conservation tillage and conservation cropping systems, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

Generally, a combination of several practices is needed to control *wind erosion* and *water erosion*. Conservation tillage, stripcropping, field windbreaks, contour farming, conservation cropping systems, crop residue management, terraces, diversions, and grassed waterways help to prevent excessive soil loss.

Measures that are effective in maintaining *soil fertility* include applying fertilizer, both organic and inorganic, including manure; incorporating crop residue or green manure crops into the soil; and using proper crop rotations. Controlling erosion helps to prevent the loss of organic matter and plant nutrients and thus helps to maintain productivity, although the level of fertility can be reduced even in areas where erosion is controlled. All soils used for nonirrigated crops respond well to applications of fertilizer.

Some of the considerations shown in the table cannot be easily overcome. These are *channels*, *flooding*, *gullies*, and *ponding*.

Additional considerations are as follows:

Lime content, *limited available water capacity*, *limited content of organic matter*, *potential poor tilth and compaction*, and *restricted permeability*.—These limitations can be minimized by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems. Also, crops may respond well to additions of phosphate fertilizer to soils that have a high content of lime.

Potential for ground-water contamination.—The proper use of nutrients and pesticides can reduce the risk of ground-water contamination.

Potential for surface-water contamination.—The risk of surface-water contamination can be reduced by the proper use of nutrients and pesticides and by conservation farming practices that reduce the runoff rate.

Surface crusting.—This limitation retards seedling development after periods of heavy rainfall.

Surface rock fragments.—This limitation causes rapid wear of tillage equipment. It cannot be easily overcome.

Surface stones.—Stones or boulders on or near the surface can hinder normal tillage unless they are removed.

Salt content.—In areas where this is a limitation, only salt-tolerant crops should be grown.

On irrigated soils the main management concerns are *efficient water use*, *nutrient management*, *control of erosion*, *pest and weed control*, and *timely planting and harvesting* for a successful crop. An irrigation system that provides optimum control and distribution of water at minimum cost is needed. Overirrigation wastes water, leaches plant nutrients, and causes erosion. Also, it can increase wetness and soil salinity.

Explanation of Criteria

Acid soil.—The pH is less than 6.1.

Channeled.—The word “channeled” is included in the map unit name.

Dense layer.—The bulk density is 1.80 g/cc or greater within the soil profile.

Depth to rock.—The depth to bedrock is less than 40 inches.

Eroded.—The word “eroded” is included in the map unit name.

Excessive permeability.—Saturated hydraulic conductivity is 42 micrometers per second or more within the soil profile.

Flooding.—Flooding is occasional, frequent, or very frequent.

Gullied.—The word “gullied” is included in the map unit name.

High content of organic matter.—The surface layer has more than 20 percent organic matter.

Lime content.—The pH is 7.4 or more in the surface layer, or the wind erodibility group is 4L.

Limited available water capacity.—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

Limited content of organic matter.—The content of organic matter is 2 percent or less in the surface layer.

Ponding.—Ponding duration is assigned to the map unit component. Water is above the surface.

Potential poor tilth and compaction.—The content of clay is 27 percent or more in the surface layer.

Potential for ground-water contamination (by nutrients or pesticides).—The depth to a zone in which the soil moisture status is wet is 4 feet or less, the saturated hydraulic conductivity of any layer is more than 42 micrometers per second, or the depth to bedrock is less than 60 inches.

Potential for surface-water contamination (by nutrients or pesticides).—The map unit component is occasionally, frequently, or very frequently flooded, is subject to ponding, is assigned to hydrologic group C or D and has a slope of more than 2 percent, is assigned to hydrologic group A and has a slope of more than 6 percent, or is assigned to hydrologic

group B, has a slope of 3 percent or more, and has a K factor of more than 0.17.

Previously eroded.—The word “eroded” is included in the map unit name.

Restricted permeability.—Saturated hydraulic conductivity is less than 0.42 micrometer per second within the soil profile.

Salt content.—The electrical conductivity is 4 or more in the surface layer or 8 or more within a depth of 30 inches.

Slope (equipment limitation).—The slope is more than 15 percent.

Surface crusting.—The content of clay is 27 percent or more and the content of organic matter is 2 percent or less in the surface layer.

Surface rock fragments (equipment limitation).—The terms describing the texture of the surface layer include any rock fragment modifier, except for gravelly, channery, stony, very stony, extremely stony, bouldery, very bouldery, and extremely bouldery.

Surface stones (equipment limitation).—The word “stony” or “bouldery” is included in the description of the surface layer, or 0.01 percent or more of the surface is covered with boulders.

Water erosion.—Either the slope is 6 percent or more, or the slope is more than 3 percent and less than 6 percent and the surface layer is not sandy.

Wet soil moisture status.—A zone in which the soil moisture status is wet is within 2.5 feet of the surface.

Wind erosion.—The wind erodibility group is 1, 2, 3, or 4L.

Hydrologic groups are described under the heading “Water Features.” Erosion factors (e.g., K factor) and wind erodibility groups are described under the heading “Physical and Chemical Properties.”

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 4. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the

proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Pasture and Hayland Interpretations

Under good management, proper grazing is essential for the production of high-quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), or the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about forage yields other than those shown in table 4.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and

limitations of groups of soils for woodland or for engineering purposes.

In the capability system, soils generally are grouped at three levels—capability class, subclass, and unit (USDA, 1961). These categories indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes 1, 2, 3, and 4 are suitable for the mechanized production of commonly grown field crops and for pasture and woodland. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class 1 to class 4. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes 5, 6, and 7 are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class 5 to class 7.

Areas in class 8 are generally not suitable for crops, pasture, or woodland without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

Capability subclasses identify the dominant kind of limitation in the class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2*e*. The letter *e* shows that the main hazard is the risk of erosion unless a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class 1 because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use mainly to pasture, woodland, wildlife habitat, or recreation.

The capability classification of map units in the survey area is given in table 4.

Prime Farmland

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, or woodland or for other purposes. They either are used for food and fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures. Public land is land not available for farming in National forests, National parks, military reservations, and State parks.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable, and the level of acidity or alkalinity and the content of salts and sodium are acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils that have a zone high in the profile in which the soil moisture status is wet or soils that are subject to flooding may qualify as prime farmland where these limitations are overcome by drainage measures or flood control. Onsite evaluation is necessary to

determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

About 212,427 acres, or nearly 77 percent of the survey area, meets the requirements for prime farmland.

The map units in the survey area that meet the requirements for prime farmland are listed in table 5. This list does not constitute a recommendation for a particular land use. On some soils included in the table, measures that overcome limitations are needed. The need for these measures is indicated in parentheses after the map unit name. The location of each map unit is shown on the soil maps. The soil qualities that affect use and management are described in the section "Soil Map Unit Descriptions."

Windbreaks and Environmental Plantings

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not originally support trees. Knowledge of how trees perform on such land can be gained only by observing and recording the performance of trees that have been planted and have survived. Many popular windbreak species are not indigenous to the areas in which they are planted.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters, a tree or shrub may grow well or grow poorly, depending on

the characteristics of the soil. Each tree or shrub has definable potential heights in a given physiographic area and under a given climate. Accurate definitions of potential heights are necessary when a windbreak is planned and designed.

Table 6 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in this table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from local offices of the Natural Resources Conservation Service or the Cooperative Extension Service or from a nursery.

Windbreak Suitability Groups

Windbreak suitability groups consist of soils in which the kinds and degrees of the hazards and limitations that affect the survival and growth of trees and shrubs in windbreaks are about the same. The windbreak suitability groups assigned to the soils in the survey area are listed in table 7.

Group 1 consists of soils that are somewhat poorly drained or moderately well drained, are rapidly permeable to moderately slowly permeable, and do not have free carbonates in the upper 20 inches.

Group 1K consists of soils that are somewhat poorly drained or moderately well drained, are rapidly permeable to moderately slowly permeable, and have free carbonates within 20 inches of the surface. These soils may be very slightly saline or slightly saline (the electrical conductivity is 2 to 8).

Group 2 consists of poorly drained soils that have been artificially drained and do not have free carbonates in the upper 20 inches. Permeability varies.

Group 2H consists of very poorly drained soils that have been artificially drained and have more than 16 inches of organic material. Permeability varies.

Group 2K consists of poorly drained or very poorly drained soils that have been artificially drained and have free carbonates within 20 inches of the surface. Permeability varies. These soils may be very slightly saline or slightly saline (the electrical conductivity is 2 to 8).

Group 2W consists of very poorly drained soils that are subject to ponding and have been artificially drained. It includes soils that have an organic surface layer up to 16 inches thick. Permeability varies.

Group 3 consists of soils that are well drained or moderately well drained and are loamy or silty

throughout. Permeability is moderate or moderately slow. These soils do not have free carbonates in the upper 20 inches.

Group 4 consists of soils that are well drained, moderately well drained, or somewhat poorly drained and have a silty or loamy surface layer and a clayey subsoil. Permeability is slow or very slow.

Group 4C consists of soils that are well drained, moderately well drained, or somewhat poorly drained and have a clayey surface layer and subsoil. Permeability is slow or very slow.

Group 4F consists of soils that are well drained, moderately well drained, or somewhat poorly drained and have a substratum of dense till. Permeability is slow or very slow.

Group 5 consists of soils that are excessively drained to moderately well drained and have a moderate available water capacity. These soils are dominantly fine sandy loam or sandy loam, but some are sandy in the upper part and loamy in the lower part.

Group 6D consists of excessively drained to moderately well drained, loamy soils that have bedrock at a depth of 20 to 40 inches. These soils have a low or moderate available water capacity.

Group 6G consists of excessively drained to moderately well drained soils that are loamy in the upper part and have sand or sand and gravel at a depth of 20 to 40 inches. These soils have a low or moderate available water capacity.

Group 7 consists of excessively drained to well drained soils that are dominantly loamy fine sand or coarser textured and are shallow to sand or to sand and gravel. These soils have a low available water capacity.

Group 8 consists of excessively drained to well drained, loamy soils that have free carbonates within 20 inches of the surface.

Group 9W consists of soils that are somewhat poorly drained, poorly drained, or very poorly drained and are moderately saline (the electrical conductivity is 8 to 16).

Group 10 consists of soils or miscellaneous areas that generally are not suitable for windbreaks. One or more characteristics, such as soil depth, texture, wetness, available water capacity, or slope, limit the planting, survival, or growth of trees and shrubs.

Recreation

The soils of the survey area are rated in tables 8a and 8b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent

to which the soils are limited by all of the soil features that affect the recreational uses.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in the tables can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock

or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a zone in which the soil moisture status is wet, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a zone in which the soil moisture status is wet, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. If food, cover, or water is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area.

If the soils have potential for habitat development, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In table 9, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be

established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants used by wildlife. Examples are corn, soybeans, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes planted for wildlife food and cover. Examples are brome grass, timothy, orchard grass, clover, alfalfa, wheat grass, and birdsfoot trefoil.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds, that provide food and cover for wildlife. Examples are bluestems, indiangrass, blueberry, goldenrod, lambsquarters, dandelions, blackberry, ragweed, wheat grass, and nightshade.

The major soil properties affecting the growth of grain and forage crops and wild herbaceous plants are depth of the root zone, texture of the surface layer, the amount of water available to plants, wetness, salinity, and flooding. The length of the growing season also is important.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage that wildlife eat. Examples are oak, poplar, box elder, birch, maple, green ash, willow, and American elm.

Coniferous plants are cone-bearing trees, shrubs, or ground cover that provide habitat or supply food in the form of browse, seed, or fruit-like cones. Examples are pine, spruce, cedar, and tamarack.

The major soil properties affecting the growth of hardwood and coniferous trees and shrubs are depth of the root zone, the amount of water available to plants, and wetness.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Wetland plants produce food or cover for wetland wildlife. Examples of these plants are smartweeds, wild millet, rushes, sedges, bulrushes, wild rice,

arrowhead, waterplantain, cattail, prairie cordgrass, bluejoint grass, asters, and beggarticks.

The major soil properties affecting wetland plants are texture of the surface layer, wetness, acidity or alkalinity, and slope.

Shallow water areas have an average depth of less than 5 feet. They are useful as habitat for some wildlife species. They are naturally wet areas or are created by dams, levees, or water-control measures in marshes or streams. Examples are waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds.

The major soil properties affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, and shrubs. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The wildlife attracted to these areas include ring-necked pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, and red fox.

Habitat for woodland wildlife consists of areas of hardwoods or conifers or a mixture of these and associated grasses, legumes, and wild herbaceous plants. The wildlife attracted to this habitat include wild turkey, ruffed grouse, thrushes, woodpeckers, owls, tree squirrels, raccoon, and white-tailed deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas, bogs, or flood plains that support water-tolerant plants. The wildlife attracted to this habitat include ducks, geese, herons, bitterns, rails, kingfishers, muskrat, otter, mink, and beaver.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, agricultural waste management, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply

only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a zone in which the soil moisture status is wet, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, linear extensibility, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; plan detailed onsite investigations of soils and geology; evaluate alternative sites for waste management facilities; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 10a and 10b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a zone in which the soil moisture status is wet, ponding, flooding, subsidence,

linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a zone in which the soil moisture status is wet, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a zone in which the soil moisture status is wet, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a zone in which the soil moisture status is wet, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a zone in which the soil moisture status is wet, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense

layers influence the ease of digging, filling, and compacting. Depth to a zone in which the soil moisture status is wet, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to a zone in which the soil moisture status is wet, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 11a and 11b show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher

concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye

used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a zone in which the soil moisture status is wet, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a zone in which the soil moisture status is wet, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a zone in which the soil moisture status is wet, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood that wind

erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a zone in which the soil moisture status is wet, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a zone in which the soil moisture status is wet, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a zone in which the soil moisture status is wet, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a zone in which the soil moisture status is wet, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a zone in which the soil moisture status is wet, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a zone in which the soil moisture status is wet, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erosion factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a zone in which the soil moisture status is wet, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Construction Materials

Tables 12a and 12b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Sand and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 12a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of sand and gravel. A rating of good or fair means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

The soils are rated *good*, *fair*, or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These

properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In table 12b, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a zone in which the soil moisture status is wet, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a zone in which the soil moisture status is wet, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a zone in which the soil moisture status is wet, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 13 gives information on the soil properties and site features that affect water management. The

degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses.

Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected.

Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A seasonal zone in which the soil moisture status is wet affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent zone in which the soil moisture status is wet. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent zone in which the soil moisture status is wet, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Table 3.--Cropland Management Considerations

(See text for a description of the considerations listed in this table)

Map symbol and component name	Pct. of map unit	Cropland management considerations
GP: Pits, gravel. Udipsamments.		
L5A: Delft, overwash-----	50	Potential for ground-water contamination Water erosion Wet soil moisture status
Delft-----	40	Potential for ground-water contamination Wet soil moisture status
Glencoe-----	5	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
L13A: Klossner, drained-----	80	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Mineral soil, drained-----	15	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Houghton, drained-----	5	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
L14A: Houghton, drained-----	80	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Klossner, drained-----	10	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L14A: Mineral soil, drained-----	10	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L15A: Klossner, ponded-----	30	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Okoboji, ponded-----	30	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Glencoe, ponded-----	30	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Houghton, ponded-----	10	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L16A: Muskego, ponded-----	30	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Blue Earth, ponded-----	30	High content of organic matter Lime content Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Houghton, ponded-----	30	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Klossner, ponded-----	10	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L26B: Shorewood-----	90	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L26B:		
Good Thunder-----	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Minnetonka-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L36A:		
Hamel, overwash-----	50	Potential for ground-water contamination Water erosion Wet soil moisture status
Hamel-----	43	Potential for ground-water contamination Wet soil moisture status
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Glencoe-----	2	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L40B:		
Angus-----	45	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Kilkenny-----	40	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Lerdal-----	10	Acid soil Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Mazaska-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L41C2:		
Lester, eroded-----	45	Potential for surface-water contamination Previously eroded Water erosion
Kilkenny, eroded-----	40	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L41C2: Derrynane-----	5	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
L41D2: Lester, eroded-----	45	Slope Potential for surface-water contamination Previously eroded Water erosion
Kilkenny, eroded-----	35	Slope Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Derrynane-----	5	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
Ridgeton-----	5	Potential for surface-water contamination Previously eroded Water erosion
L41E: Lester-----	45	Slope Potential for surface-water contamination Water erosion
Kilkenny-----	40	Slope Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Derrynane-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Ridgeton-----	5	Slope Potential for surface-water contamination Water erosion
L48A: Derrynane, overwash-----	50	Potential poor tilth and compaction Potential for ground-water contamination Water erosion Wet soil moisture status
Derrynane-----	40	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L48A: Glencoe-----	5	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Water erosion
L49A: Klossner, surface drained----	65	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Klossner, drained-----	20	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Mineral soil, drained-----	15	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L50A: Houghton, surface drained----	40	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Muskego, surface drained----	40	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Klossner, drained-----	10	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Mineral soil, drained-----	10	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L51C2: Gladek, eroded-----	80	Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L51C2:		
Barrington-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Lester, eroded-----	5	Potential for surface-water contamination Previously eroded Water erosion
Madelia-----	5	Potential poor tilth and compaction Potential for ground-water contamination Previously eroded Wet soil moisture status
L56A:		
Muskego, frequently flooded--	45	Flooding High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Klossner, frequently flooded	45	Flooding High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Suckercreek, frequently flooded-----	10	Flooding Lime content Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L57A:		
Medo, drained-----	80	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Mineral soil, drained-----	15	Excessive permeability Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Houghton, drained-----	5	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L63A:		
Klossner-----	85	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Lura-----	10	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Brownton-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
L64A:		
Tadkee-----	50	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Tadkee, depression-----	36	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Better drained soil-----	8	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Granby-----	4	Excessive permeability Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Less sandy soil-----	2	Excessive permeability Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
L73A:		
Blue Earth-----	80	High content of organic matter Lime content Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L73A:		
Belleville-----	10	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Canisteo-----	10	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
L74A:		
Estherville-----	87	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
Hawick-----	10	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion
Biscay-----	3	Excessive permeability Potential for ground-water contamination Wet soil moisture status
L75B:		
Barrington-----	85	Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Gladek-----	10	Potential for surface-water contamination Water erosion
Madelia-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L76B:		
Dickinson-----	80	Excessive permeability Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Litchfield-----	13	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Darfur-----	5	Potential for ground-water contamination Wet soil moisture status
Clarion-----	2	Potential for ground-water contamination Potential for surface-water contamination Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L77A:		
Brownton-----	75	Lime content Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
Marna-----	15	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Lura-----	10	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
L78A:		
Canistee-----	65	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Crippin-----	10	Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
Glencoe-----	10	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Canistee, depressional-----	5	Lime content Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Harps-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Webster-----	5	Potential for ground-water contamination Wet soil moisture status
L79B:		
Clarion-----	65	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Clarion, eroded-----	25	Potential for ground-water contamination Potential for surface-water contamination Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L79B:		
Nicollet-----	8	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Webster-----	2	Potential for ground-water contamination Wet soil moisture status
L80C2:		
Lester, eroded-----	75	Potential for surface-water contamination Previously eroded Water erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Hamel-----	5	Potential for ground-water contamination Previously eroded Water erosion Wet soil moisture status
Reedslake-----	5	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	5	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
L80D2:		
Lester, eroded-----	75	Slope Potential for surface-water contamination Previously eroded Water erosion
Ridgeton-----	10	Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	8	Slope Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Hamel-----	2	Potential for ground-water contamination Previously eroded Water erosion Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L81A:		
Cordova-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Le Sueur-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Rolfe-----	5	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L82A:		
Marna-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Barbert-----	10	Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Guckeen-----	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L83A:		
Webster-----	65	Potential for ground-water contamination Wet soil moisture status
Glencoe-----	15	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Canisteo-----	10	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Nicollet-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L84A:		
Glencoe-----	80	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Very poorly drained muck-----	10	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L84A:		
Canisteo-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Harps-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
L85A:		
Nicollet-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Clarion-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Webster-----	5	Potential for ground-water contamination Wet soil moisture status
L86A:		
Madelia-----	90	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Okoboji-----	5	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Spicer-----	3	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Kingston-----	2	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L87A:		
Kingston-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Truman-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Madelia-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L88A:		
Lura-----	85	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Brownton-----	10	Lime content Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
Organic soil-----	5	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status Wind erosion
L89A:		
Guckeen-----	82	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Marna-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Clarion clay loam-----	8	Potential for ground-water contamination Potential for surface-water contamination Water erosion
L90A:		
Le Sueur-----	75	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Cordova-----	13	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Reedslake-----	12	Potential for ground-water contamination Potential for surface-water contamination Water erosion
L91A:		
Mazaska-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Lerdal-----	10	Acid soil Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L91A: Rolfe-----	5	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L92A: Darfur-----	78	Potential for ground-water contamination Wet soil moisture status
Fieldon-----	10	Excessive permeability Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
Litchfield-----	5	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Webster-----	5	Potential for ground-water contamination Wet soil moisture status
Dassel-----	2	Excessive permeability Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L93A: Muskego-----	82	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status Wind erosion
Blue Earth-----	10	High content of organic matter Lime content Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Mineral soil, drained-----	5	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Belleville-----	3	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
L94A: Lowlein-----	75	Potential for ground-water contamination Wet soil moisture status Wind erosion
Linder-----	15	Excessive permeability Potential for ground-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L94A: Dickinson-----	8	Excessive permeability Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Darfur-----	2	Potential for ground-water contamination Wet soil moisture status
L95E: Hawick-----	80	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Estherville-----	10	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Tomall-----	10	Excessive permeability Potential for ground-water contamination
L96B: Estherville-----	55	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Hawick-----	35	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion
Tomall-----	8	Excessive permeability Potential for ground-water contamination
Biscay-----	2	Excessive permeability Potential for ground-water contamination Wet soil moisture status
L97C: Hawick-----	60	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion
Estherville-----	30	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L97C: Tomall-----	10	Excessive permeability Potential for ground-water contamination
L98A: Crippin-----	50	Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
Nicollet-----	40	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Canisteo-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Clarion-----	5	Potential for ground-water contamination Potential for surface-water contamination Water erosion
L99B: Clarion-----	62	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Swanlake-----	25	Lime content Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Nicollet-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Webster-----	3	Potential for ground-water contamination Wet soil moisture status
L100B: Clarion-----	45	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Estherville-----	35	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Lowlein-----	5	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
Nicollet-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
LI00B:		
Swanlake-----	5	Lime content Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Webster-----	5	Potential for ground-water contamination Wet soil moisture status
LI01C2:		
Omsrud, eroded-----	40	Potential for surface-water contamination Previously eroded Water erosion
Hawick-----	30	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	20	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Delft-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
LI01D2:		
Omsrud, eroded-----	40	Slope Potential for surface-water contamination Previously eroded Water erosion
Hawick-----	25	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	20	Slope Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Ridgeton-----	6	Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L101D2:		
Delft-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Terril-----	4	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
L102C2:		
Omsrud, eroded-----	45	Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	25	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Omsrud-----	15	Potential for surface-water contamination Previously eroded Water erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Delft-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
L102D2:		
Omsrud, eroded-----	45	Slope Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	20	Slope Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Omsrud-----	15	Slope Potential for surface-water contamination Previously eroded Water erosion
Ridgeton-----	8	Potential for surface-water contamination Previously eroded Water erosion
Delft-----	6	Potential for ground-water contamination Previously eroded Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L102D2: Terril-----	6	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
L103A: Fieldon-----	50	Excessive permeability Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
Canistee-----	35	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Darfur-----	10	Potential for ground-water contamination Wet soil moisture status
Glencoe-----	5	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L105C2: Lester, eroded-----	45	Potential for surface-water contamination Previously eroded Water erosion
Hawick-----	35	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Hamel-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Storden, eroded-----	5	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
L105D2: Lester, eroded-----	45	Slope Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L105D2:		
Hawick-----	35	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Ridgeton-----	8	Potential for surface-water contamination Previously eroded Water erosion
Hamel-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Storden, eroded-----	5	Slope Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Terril-----	2	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
L106C2:		
Lester, eroded-----	62	Potential for surface-water contamination Previously eroded Water erosion
Storden, eroded-----	20	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Hamel-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Reedslake-----	3	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
L106D2:		
Lester, eroded-----	62	Slope Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
LI06D2:		
Storden, eroded-----	20	Slope Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
Ridgeton-----	10	Potential for surface-water contamination Previously eroded Water erosion
Terril-----	5	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion Wet soil moisture status
Hamel-----	3	Potential for ground-water contamination Previously eroded Wet soil moisture status
LI07A:		
Canisteeo-----	50	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Glencoe-----	35	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Harps-----	10	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Canisteeo, depressional-----	3	Lime content Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Crippin-----	2	Lime content Potential for ground-water contamination Wet soil moisture status Wind erosion
LI08A:		
Cordova-----	65	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Rolfe-----	30	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L108A: Le Sueur-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L109A: Marna-----	65	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Barbert-----	30	Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Guckeen-----	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L110E: Lester-----	50	Slope Potential for surface-water contamination Water erosion
Ridgeton-----	30	Slope Potential for surface-water contamination Water erosion
Cokato-----	10	Slope Potential for surface-water contamination Water erosion
Belview-----	6	Slope Lime content Potential for surface-water contamination Water erosion Wind erosion
Hamel-----	2	Potential for ground-water contamination Water erosion Wet soil moisture status
Terril-----	2	Potential for ground-water contamination Potential for surface-water contamination Water erosion
L110F: Lester-----	55	Slope Potential for surface-water contamination Water erosion
Ridgeton-----	30	Slope Potential for surface-water contamination Water erosion
Cokato-----	8	Slope Potential for surface-water contamination Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L110F: Belview-----	4	Slope Lime content Potential for surface-water contamination Water erosion Wind erosion
Terril-----	2	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Hamel-----	1	Potential for ground-water contamination Water erosion Wet soil moisture status
L111A: Nicollet-----	85	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Clarion-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Webster-----	5	Potential for ground-water contamination Wet soil moisture status
L112A: Webster-----	85	Potential for ground-water contamination Wet soil moisture status
Glencoe-----	10	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Nicollet-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L113B: Reedslake-----	75	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Le Sueur-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Reedslake, eroded-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Cordova-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L114A: Hanlon, rarely flooded-----	85	Potential for ground-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L114A: Coland, occasionally flooded	10	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Minneopa, rarely flooded-----	5	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
L115A: Brownton-----	55	Lime content Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
Lura-----	35	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Marna-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L116A: Le Sueur-----	45	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Lerdal-----	40	Acid soil Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
Mazaska-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Kilkenny-----	5	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
L117C2: Omsrud, eroded-----	65	Potential for surface-water contamination Previously eroded Water erosion
Omsrud-----	15	Potential for surface-water contamination Previously eroded Water erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L117C2:		
Terril-----	10	Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
Delft-----	5	Potential for ground-water contamination Previously eroded Wet soil moisture status
Storden, eroded-----	5	Lime content Limited content of organic matter Potential for surface-water contamination Previously eroded Water erosion Wind erosion
L118A:		
Rushriver, frequently flooded	85	Flooding Lime content Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Houghton, frequently flooded	5	Flooding High content of organic matter Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Klossner, frequently flooded	5	Flooding High content of organic matter Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Medo, frequently flooded-----	5	Flooding High content of organic matter Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
L119B:		
Angus-----	80	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Angus, eroded-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Cordova-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Le Sueur-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L120A:		
Good Thunder-----	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Ocheyedan-----	10	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Minnetonka-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L121B:		
Clarion-----	80	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion
Guckeen-----	15	Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
Marna-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
L122B:		
Reedslake-----	55	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Estherville-----	25	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Le Sueur-----	10	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Cordova-----	5	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Lowlein-----	5	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion
L123A:		
Belleville-----	85	Excessive permeability Potential for ground-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L123A: Granby-----	15	Excessive permeability Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
L124A: Glencoe mucky clay loam-----	85	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Canisteo-----	10	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
Glencoe clay loam-----	5	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L125A: Hanlon, rarely flooded-----	60	Potential for ground-water contamination Wet soil moisture status Wind erosion
Coland, occasionally flooded	25	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Minneopa, rarely flooded----	15	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
L126A: Coland, occasionally flooded	80	Flooding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Minneopa, occasionally flooded-----	10	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L126A: Havelock, occasionally flooded-----	5	Flooding Lime content Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillville, occasionally flooded-----	5	Flooding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L127A: Coland, frequently flooded---	80	Flooding Channeled Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Minneopa, occasionally flooded-----	10	Channeled Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
Havelock, frequently flooded	5	Flooding Channeled Lime content Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Spillville, occasionally flooded-----	5	Flooding Channeled Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
L128A: Mazaska-----	60	Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status
Rolfe-----	30	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Lerdal-----	10	Acid soil Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status

Table 3.--Cropland Management Considerations--Continued

Map symbol and component name	Pct. of map unit	Cropland management considerations
L129B: Terril-----	90	Potential for ground-water contamination Potential for surface-water contamination Water erosion
Delft-----	5	Potential for ground-water contamination Wet soil moisture status
Hamel-----	5	Potential for ground-water contamination Wet soil moisture status
L130A: Okoboji mucky silty clay loam	75	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Okoboji silty clay loam-----	15	Ponding Potential poor tilth and compaction Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Brownton-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Restricted permeability Wet soil moisture status
Spicer-----	5	Lime content Potential poor tilth and compaction Potential for ground-water contamination Wet soil moisture status Wind erosion
M-W. Water, miscellaneous		
U3B. Udorthents (cut and fill land)		
W. Water		

Table 4.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
GP:								
Pits, gravel.								
Udipsamments.								
L5A-----			5.6	4.4	---	154	92	47
Delft, overwash-----	50	2w						
Delft-----	40	2w						
L13A-----	80	3w	4.1	3.1	---	127	81	39
Klossner, drained								
L14A-----	80	3w	---	---	---	126	81	39
Houghton, drained								
L15A-----			---	---	---	---	---	---
Klossner, ponded-----	30	8w						
Okoboji, ponded-----	30	8w						
Glencoe, ponded-----	30	8w						
L16A-----			---	---	---	---	---	---
Muskego, ponded-----	30	8w						
Blue Earth, ponded-----	30	8w						
Houghton, ponded-----	30	8w						
L26B-----	90	2e	5.6	4.4	---	145	85	42
Shorewood								
L36A-----			5.8	4.5	---	155	90	47
Hamel, overwash-----	50	2w						
Hamel-----	43	2w						
L40B-----			5.5	4.3	---	149	86	46
Angus-----	45	2e						
Kilkenny-----	40	2e						

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L41C2----- Lester, eroded-----	45	3e	6.1	4.4	---	142	81	43
Kilkenny, eroded-----	40	3e						
L41D2----- Lester, eroded-----	45	4e	5.5	4.2	---	127	71	41
Kilkenny, eroded-----	35	4e						
L41E----- Lester-----	45	6e	4.0	3.1	---	---	---	---
Kilkenny-----	40	6e						
L48A----- Derrynane, overwash----	50	2w	5.8	4.4	---	145	90	50
Derrynane-----	40	2w						
L49A----- Klossner, surface drained-----	65	6w	---	---	5.0	---	---	---
Klossner, drained-----	20	3w						
L50A----- Houghton, surface drained-----	40	6w	---	---	5.0	---	---	---
Muskego, surface drained	40	6w						
L51C2----- Gladek, eroded	80	3e	5.8	4.4	---	139	81	43
L56A----- Muskego, frequently flooded-----	45	6w	---	---	---	---	---	---
Klossner, frequently flooded-----	45	6w						
L57A----- Medo, drained	80	3w	4.4	3.3	---	125	75	38

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L63A----- Klossner	85	3w	4.3	3.3	---	127	81	39
L64A----- Tadkee-----	50	3w	---	---	---	---	---	---
Tadkee, depressional----	36	6w						
L73A----- Blue Earth	80	3w	4.5	3.5	---	118	78	36
L74A----- Estherville	87	3s	2.7	2.1	---	75	57	21
L75B----- Barrington	85	2e	5.7	4.4	---	155	86	49
L76B----- Dickinson	80	3e	4.1	3.1	---	105	76	32
L77A----- Brownton	75	2w	5.4	4.1	---	148	84	44
L78A----- Canisteo	65	2w	5.6	4.3	---	153	86	44
L79B----- Clarion	65	2e	6.4	5.0	---	160	92	51
L80C2----- Lester, eroded	75	3e	5.9	4.5	---	145	82	44
L80D2----- Lester, eroded	75	4e	5.2	4.0	---	123	67	40
L81A----- Cordova	85	2w	5.8	4.4	---	153	89	49
L82A----- Marna	85	2w	5.7	4.3	---	151	90	49
L83A----- Webster	65	2w	5.7	4.4	---	157	89	48
L84A----- Glencoe	80	3w	4.6	3.6	---	137	81	39

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L85A----- Nicollet	85	1	6.4	5.0	---	166	94	51
L86A----- Madelia	90	2w	5.8	4.4	---	159	90	48
L87A----- Kingston	85	1	6.4	4.9	---	167	93	52
L88A----- Lura	85	3w	4.5	3.5	---	131	80	38
L89A----- Guckeen	82	2w	6.3	4.8	---	162	93	51
L90A----- Le Sueur	75	1	6.4	5.0	---	162	93	51
L91A----- Mazaska	85	2w	5.1	4.1	---	132	84	43
L92A----- Darfur	78	2w	5.4	4.1	---	147	86	45
L93A----- Muskego	82	4w	4.5	3.5	---	120	80	35
L94A----- Lowlein	75	1	5.0	3.8	---	136	88	42
L95E----- Hawick	80	7s	2.3	1.7	---	---	---	---
L96B----- Estherville----- Hawick-----	55 35	3s 4s	2.7	2.0	---	69	54	21
L97C----- Hawick----- Estherville-----	60 30	4s 4s	2.3	1.7	---	61	50	18

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L98A----- Crippin-----	50	1	6.5	5.0	---	164	91	49
Nicollet-----	40	1						
L99B----- Clarion-----	62	2e	6.5	5.0	---	159	91	49
Swanlake-----	25	2e						
L100B----- Clarion-----	45	2e	5.0	3.9	---	127	78	40
Estherville-----	35	3s						
L101C2----- Omsrud, eroded-----	40	3e	4.7	3.5	---	115	71	36
Hawick-----	30	4s						
Storden, eroded-----	20	3e						
L101D2----- Omsrud, eroded-----	40	4e	4.4	3.4	---	108	64	34
Hawick-----	25	6s						
Storden, eroded-----	20	4e						
L102C2----- Omsrud, eroded-----	45	3e	5.8	4.5	---	144	82	45
Storden, eroded-----	25	3e						
L102D2----- Omsrud, eroded-----	45	4e	5.2	4.0	---	129	71	40
Storden, eroded-----	20	4e						
L103A----- Fieldon-----	50	2w	5.5	4.2	---	151	86	42
Canisteo-----	35	2w						

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L105C2----- Lester, eroded-----	45	3e	4.5	3.5	---	112	69	34
Hawick-----	35	4s						
L105D2----- Lester, eroded-----	45	4e	4.1	3.1	---	99	60	32
Hawick-----	35	6s						
L106C2----- Lester, eroded-----	62	3e	5.9	4.5	---	142	80	44
Storden, eroded-----	20	3e						
L106D2----- Lester, eroded-----	62	4e	5.3	4.0	---	122	67	40
Storden, eroded-----	20	4e						
L107A----- Canisteo-----	50	2w	5.3	4.1	---	148	84	42
Glencoe-----	35	3w						
L108A----- Cordova-----	65	2w	5.3	4.0	---	134	78	43
Rolfe-----	30	3w						
L109A----- Marna-----	65	2w	5.2	4.0	---	145	87	46
Barbert-----	30	3w						
L110E----- Lester-----	50	6e	4.1	3.2	---	---	---	---
Ridgeton-----	30	4e						
L110F----- Lester-----	55	7e	---	---	---	---	---	---
Ridgeton-----	30	6e						

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L111A----- Nicollet	85	1	6.5	5.0	---	166	94	51
L112A----- Webster	85	2w	5.8	4.4	---	159	90	49
L113B----- Reedslake	75	2e	6.4	4.9	---	160	91	51
L114A----- Hanlon, rarely flooded	85	2s	5.1	3.9	---	132	76	39
L115A----- Brownton-----	55	2w	5.1	3.9	---	142	83	42
Lura-----	35	3w						
L116A----- Le Sueur-----	45	1	5.7	4.4	---	141	82	44
Lerdal-----	40	2e						
L117C2----- Omsrud, eroded	65	3e	5.9	4.5	---	149	84	46
L118A----- Rushriver, frequently flooded	85	5w	---	---	---	---	---	---
L119B----- Angus	80	2e	5.7	4.4	---	158	90	49
L120A----- Good Thunder	80	2w	5.6	4.3	---	147	85	43
L121B----- Clarion	80	2e	5.9	4.5	---	159	93	51
L122B----- Reedslake-----	55	2e	5.4	4.1	---	136	82	43
Estherville-----	25	3s						
L123A----- Belleville	85	2w	3.4	2.6	---	101	72	31

See footnote at end of table.

Table 4.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and component name	Pct. of map unit	Land capability	Bromegrass- alfalfa	Bromegrass- alfalfa hay	Reed canarygrass	Corn	Oats	Soybeans
			AUM*	Tons	Tons	Bu	Bu	Bu
L124A----- Glencoe	85	3w	4.6	3.5	---	133	81	38
L125A----- Hanlon, rarely flooded--	60	2s	5.0	3.8	---	127	73	38
Coland, occasionally flooded-----	25	2w						
L126A----- Coland, occasionally flooded	80	2w	5.1	3.9	---	141	77	43
L127A----- Coland, frequently flooded	80	5w	---	---	---	---	---	---
L128A----- Mazaska-----	60	2w	4.8	3.7	---	118	74	39
Rolfe-----	30	3w						
L129B----- Terril	90	2e	6.5	5.1	---	160	95	51
L130A----- Okoboji	75	3w	4.4	3.4	---	131	81	38
M-W. Water, miscellaneous								
U3B. Udorthents (cut and fill land)								
W. Water								

* Animal unit month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Table 5.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
L5A	Delft, overwash-Delft complex, 1 to 4 percent slopes (where drained)
L26B	Shorewood silty clay loam, 3 to 6 percent slopes
L36A	Hamel, overwash-Hamel complex, 1 to 4 percent slopes (where drained)
L40B	Angus-Kilkenny complex, 2 to 6 percent slopes
L48A	Derrynane, overwash-Derrynane complex, 1 to 4 percent slopes (where drained)
L75B	Barrington silt loam, 2 to 6 percent slopes
L76B	Dickinson fine sandy loam, 1 to 6 percent slopes
L77A	Brownton silty clay loam, 0 to 2 percent slopes (where drained)
L78A	Canisteo clay loam, 0 to 2 percent slopes (where drained)
L79B	Clarion loam, 2 to 5 percent slopes
L81A	Cordova clay loam, 0 to 2 percent slopes (where drained)
L82A	Marna silty clay loam, 0 to 2 percent slopes (where drained)
L83A	Webster clay loam, 0 to 2 percent slopes (where drained)
L84A	Glencoe clay loam, depressional, 0 to 1 percent slopes (where drained)
L85A	Nicollet clay loam, 1 to 3 percent slopes
L86A	Madelia silty clay loam, 0 to 2 percent slopes (where drained)
L87A	Kingston silty clay loam, 1 to 3 percent slopes
L88A	Lura silty clay, depressional, 0 to 1 percent slopes (where drained)
L89A	Guckeen silty clay loam, 0 to 3 percent slopes
L90A	Le Sueur clay loam, 0 to 3 percent slopes
L91A	Mazaska silty clay loam, 0 to 2 percent slopes (where drained)
L92A	Darfur loam, 0 to 2 percent slopes (where drained)
L94A	Lowlein fine sandy loam, terrace, 0 to 3 percent slopes
L98A	Crippin-Nicollet complex, 1 to 3 percent slopes
L99B	Clarion-Swanlake complex, 2 to 6 percent slopes
L103A	Fieldon-Canisteo complex, 0 to 2 percent slopes (where drained)
L107A	Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes (where drained)
L108A	Cordova-Rolfe, depressional, complex, 0 to 2 percent slopes (where drained)
L109A	Marna-Barbert, depressional, complex, 0 to 2 percent slopes (where drained)
L111A	Nicollet silty clay loam, 1 to 3 percent slopes
L112A	Webster silty clay loam, 0 to 2 percent slopes (where drained)
L113B	Reedslake loam, 2 to 5 percent slopes
L114A	Hanlon fine sandy loam, 0 to 3 percent slopes, rarely flooded
L115A	Brownton-Lura, depressional, complex, 0 to 2 percent slopes (where drained)
L116A	Le Sueur-Lerdal complex, 1 to 3 percent slopes
L119B	Angus loam, 2 to 5 percent slopes
L120A	Good Thunder silty clay loam, 0 to 3 percent slopes
L121B	Clarion clay loam, 2 to 5 percent slopes
L124A	Glencoe mucky clay loam, depressional, 0 to 1 percent slopes (where drained)
L125A	Hanlon, rarely flooded-Coland, occasionally flooded, complex, 0 to 3 percent slopes (where protected from flooding or not frequently flooded during the growing season)
L126A	Coland silty clay loam, 0 to 2 percent slopes, occasionally flooded (where protected from flooding or not frequently flooded during the growing season)
L128A	Mazaska-Rolfe, depressional, complex, 0 to 2 percent slopes (where drained)
L129B	Terril loam, 2 to 6 percent slopes
L130A	Okoboji mucky silty clay loam, depressional, 0 to 1 percent slopes (where drained)

Table 6.--Windbreaks and Environmental Plantings

(Only the soils suitable for windbreaks and environmental plantings are listed. Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L5A: Delft, overwash-----	50	---	American plum, redosier dogwood	Amur maple, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
Delft-----	40	---	American plum, redosier dogwood	Amur maple, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
Glencoe-----	5	Redosier dogwood----	---	Black ash, tall purple willow	Black willow, golden willow, white willow	---
Terril-----	5	Redosier dogwood----	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxland cottonwood
L13A: Klossner, drained-----	80	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Mineral soil, drained---	15	Redosier dogwood----	Silky dogwood	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
Houghton, drained-----	5	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
L14A: Houghton, drained-----	80	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Klossner, drained-----	10	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Mineral soil, drained---	10	Redosier dogwood----	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L26B: Shorewood-----	90	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood
Good Thunder-----	5	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, Russian- olive, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood
Minnetonka-----	5	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
L36A: Hamel, overwash-----	50	---	American cranberrybush, Nanking cherry, common chokecherry, redosier dogwood, sargent crabapple, American plum, common lilac	Black Hills spruce, blue spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry	Eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L36A: Hamel-----	43	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
Terril-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Glencoe-----	2	Redosier dogwood----	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
L40B: Angus-----	45	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Kilkenny-----	40	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L40B: Lerdal-----	10	Hedge cotoneaster---	American cranberrybush, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine	Green ash-----	Silver maple, eastern cottonwood
Mazaska-----	5	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
L41C2: Lester, eroded-----	45	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Kilkenny, eroded-----	40	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L41C2: Terril-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Derrynane-----	5	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
L41D2: Lester, eroded-----	45	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Kilkenny, eroded-----	35	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L41D2: Terril-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Derrynane-----	5	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
Ridgeton-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
L41E: Lester-----	45	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L41E: Kilkenny-----	40	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Terril-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
Derrynane-----	5	Nanking cherry-----	American cranberrybush, cotoneaster, sargent crabapple, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, blue spruce, Black Hills spruce, ponderosa pine, common hackberry	Eastern white pine, golden willow	Green ash, silver maple, Siouxland cottonwood, eastern cottonwood
Ridgeton-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
L48A: Derrynane, overwash-----	50	---	Redosier dogwood----	American plum, Amur maple, white spruce, tall purple willow	---	Golden willow, green ash

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L48A: Derrynane-----	40	---	Redosier dogwood----	American plum, Amur maple, white spruce, tall purple willow	---	Golden willow, green ash
Glencoe-----	5	Redosier dogwood----	---	Black ash, tall purple willow	Black willow, golden willow, white willow	---
Terril-----	5	Redosier dogwood----	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxland cottonwood
L49A: Klossner, surface drained-----	65	---	---	---	---	---
Klossner, drained-----	20	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Mineral soil, drained---	15	Redosier dogwood----	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
L50A: Houghton, surface drained-----	40	---	---	---	---	---
Muskego, surface drained	40	---	---	---	---	---
Klossner, drained-----	10	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Mineral soil, drained---	10	Redosier dogwood----	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
L51C2: Gladek, eroded-----	80	---	Siberian peashrub, common lilac, gray dogwood, redosier dogwood	Eastern arborvitae, eastern redcedar, Amur maple, blue spruce	Russian-olive, common hackberry, green ash, eastern white pine	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L51C2: Barrington-----	10	Silky dogwood-----	American cranberrybush, Amur honeysuckle, Amur privet	Washington hawthorn, blue spruce, eastern arborvitae, white fir	Austrian pine, Norway spruce	Pin oak, eastern white pine
Lester, eroded-----	5	---	Siberian peashrub, common lilac, gray dogwood, redosier dogwood	Eastern arborvitae, eastern redcedar, Amur maple, blue spruce	Russian-olive, common hackberry, eastern white pine, green ash	---
Madelia-----	5	---	American plum, redosier dogwood	Amur maple, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
L57A: Medo, drained-----	80	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
Mineral soil, drained---	15	Redosier dogwood---	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
Houghton, drained-----	5	---	Redosier dogwood, silky dogwood	Black ash-----	Golden willow-----	---
L63A: Klossner-----	85	---	Nannyberry, silky dogwood	White spruce-----	Norway spruce, green ash	Imperial Carolina poplar
Lura-----	10	Redosier dogwood---	---	Black ash, tall purple willow	Black willow, golden willow, white willow	---
Brownton-----	5	Honeysuckle-----	Siberian peashrub, common lilac, eastern arborvitae	Eastern redcedar, bur oak, white spruce, common hackberry	Green ash, golden willow, honeylocust	Eastern cottonwood
L64A: Tadkee-----	50	---	---	---	---	---
Tadkee, depressional---	36	---	---	---	---	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L64A:						
Better drained soil-----	8	---	Tatarian honeysuckle, common lilac, redosier dogwood	Eastern arborvitae, white spruce, Amur maple, blue spruce	Austrian pine, eastern white pine, common hackberry, green ash	Silver maple
Granby-----	4	---	---	---	---	---
Less sandy soil-----	2	---	---	---	---	---
L73A:						
Blue Earth-----	80	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Belleville-----	10	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Canisteo-----	10	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
L74A:						
Estherville-----	87	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Hawick-----	10	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L74A: Biscay-----	3	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L75B: Barrington-----	85	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Gladek-----	10	---	Siberian peashrub, common lilac, gray dogwood, redosier dogwood	Eastern arborvitae, eastern redcedar, Amur maple, blue spruce	Russian-olive, common hackberry, green ash, eastern white pine	---
Madelia-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L76B: Dickinson-----	80	Hedge cotoneaster---	American cranberrybush, American plum, Siberian peashrub, common chokecherry, common lilac, silver buffaloberry, eastern redcedar	Black Hills spruce, ponderosa pine, Amur maple, common hackberry, white spruce, Norway spruce	Eastern white pine, green ash, honeylocust, red pine	Silver maple, eastern cottonwood
Litchfield-----	13	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Darfur-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Clarion-----	2	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L77A:						
Brownton-----	75	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Marna-----	15	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Lura-----	10	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
L78A:						
Canisteo-----	65	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Crippin-----	10	---	American plum, Siberian peashrub, common chokecherry, common lilac, sargent crabapple, silver buffaloberry, cotoneaster, gray dogwood	Eastern redcedar, white spruce, Black Hills spruce, Amur maple, Norway spruce, common hackberry, ponderosa pine	Green ash, honeylocust, golden willow	Eastern cottonwood, Siouxland cottonwood
Glencoe-----	10	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L78A: Canisteo, depressional--	5	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Harps-----	5	Redosier dogwood----	Common lilac, eastern arborvitae	Blue spruce, eastern redcedar, white spruce, common hackberry	Green ash, golden willow, honeylocust	Eastern cottonwood
Webster-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L79B: Clarion-----	65	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Clarion, eroded-----	25	---	Siberian peashrub, common lilac, gray dogwood, redosier dogwood	Eastern arborvitae, eastern redcedar, Amur maple, blue spruce	Russian-olive, common hackberry, green ash, eastern white pine	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L79B: Nicollet-----	8	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Webster-----	2	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L80C2: Lester, eroded-----	75	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Terril-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L80C2: Hamel-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Reedslake-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Storden, eroded-----	5	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
L80D2: Lester, eroded-----	75	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L80D2: Ridgeton-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Storden, eroded-----	8	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
Terril-----	5	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hamel-----	2	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L81A: Cordova-----	85	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxlant cottonwood, eastern cottonwood
Le Sueur-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxlant cottonwood
Rolfe-----	5	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
L82A: Marna-----	85	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxlant cottonwood, eastern cottonwood
Barbert-----	10	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L82A: Guckeen-----	5	---	Siberian peashrub, common lilac	Bur oak, eastern arborvitae, eastern redcedar, white spruce, Austrian pine, common hackberry	Eastern white pine, green ash	---
L83A: Webster-----	65	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Glencoe-----	15	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Canisteo-----	10	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Nicollet-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L84A: Glencoe-----	80	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L84A: Very poorly drained muck	10	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Canisteo-----	5	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Harps-----	5	Redosier dogwood----	Common lilac, eastern arborvitae	Blue spruce, eastern redcedar, white spruce, common hackberry	Green ash, golden willow, honeylocust	Eastern cottonwood
L85A: Nicollet-----	85	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Clarion-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L85A: Webster-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L86A: Madelia-----	90	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Okoboji-----	5	Redosier dogwood---	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Spicer-----	3	---	---	---	---	---
Kingston-----	2	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L87A: Kingston-----	85	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Truman-----	10	---	Siberian peashrub, common lilac, gray dogwood, redosier dogwood	Eastern arborvitae, eastern redcedar, Amur maple, blue spruce	Russian-olive, common hackberry, green ash, eastern white pine	---
Madelia-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L88A: Lura-----	85	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Brownton-----	10	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L88A: Organic soil-----	5	Nanking cherry, sargent crabapple	American cranberrybush, common lilac, cotoneaster, redosier dogwood, American plum, Amur maple, Siberian peashrub, blue spruce, common chokecherry, eastern redcedar, silver buffaloberry	Austrian pine, Black Hills spruce, Manchurian crabapple, Norway spruce, Siberian crabapple, white spruce, Russian- olive, common hackberry, common hackberry, tall purple willow	Red pine-----	Golden willow, green ash, silver maple, eastern cottonwood, Siouxland cottonwood, Carolina poplar
L89A: Guckeen-----	82	---	Siberian peashrub, common lilac	Bur oak, eastern arborvitae, eastern redcedar, white spruce, Austrian pine, common hackberry	Eastern white pine, green ash	---
Marna-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Clarion clay loam-----	8	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L90A: Le Sueur-----	75	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Cordova-----	13	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Reedslake-----	12	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L91A: Mazaska-----	85	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L91A: Lerdal-----	10	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood
Rolfe-----	5	Redosier dogwood---	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
L92A: Darfur-----	78	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Fieldon-----	10	Redosier dogwood---	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Litchfield-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L92A: Webster-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Dassel-----	2	Redosier dogwood---	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
L93A: Muskego-----	82	Common ninebark, nannyberry, redosier dogwood, silky dogwood	American cranberrybush, late lilac, eastern arborvitae	White spruce, Japanese tree lilac, Manchurian crabapple	Eastern redcedar----	Imperial Carolina poplar
Blue Earth-----	10	Redosier dogwood---	---	Black ash, tall purple willow	Golden willow, white willow	---
Mineral soil, drained---	5	Redosier dogwood---	Silky dogwood-----	Green ash, northern whitecedar	Golden willow-----	Eastern cottonwood
Belleville-----	3	Redosier dogwood---	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
L94A: Lowlein-----	75	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L94A: Linder-----	15	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Dickinson-----	8	Hedge cotoneaster---	American cranberrybush, American plum, Siberian peashrub, common chokecherry, common lilac, silver buffaloberry, eastern redcedar	Black Hills spruce, ponderosa pine, Amur maple, common hackberry, white spruce, Norway spruce	Eastern white pine, green ash, honeylocust, red pine	Silver maple, eastern cottonwood
Darfur-----	2	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L95E: Hawick-----	80	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L95E: Estherville-----	10	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Tomall-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
L96B: Estherville-----	55	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Hawick-----	35	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L96B: Tomall-----	8	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Biscay-----	2	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L97C: Hawick-----	60	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Estherville-----	30	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L97C: Tomall-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L98A: Crippin-----	50	---	American plum, Siberian peashrub, common chokecherry, common lilac, sargent crabapple, silver buffaloberry, cotoneaster, gray dogwood	Eastern redcedar, white spruce, Black Hills spruce, Amur maple, Norway spruce, common hackberry, ponderosa pine	Green ash, honeylocust, golden willow	Eastern cottonwood, Siouxland cottonwood
Nicollet-----	40	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Canisteo-----	5	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L98A: Clarion-----	5	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L99B: Clarion-----	62	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Swanlake-----	25	American plum, Siberian peashrub	Common hackberry, eastern redcedar	Green ash, honeylocust	Siberian elm-----	---
Nicollet-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L99B: Webster-----	3	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L100B: Clarion-----	45	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Estherville-----	35	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Lowlein-----	5	---	Common lilac, redosier dogwood	Eastern arborvitae, white spruce, Amur maple, blue spruce	Austrian pine, eastern white pine, common hackberry, green ash	Silver maple
Nicollet-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L100B: Swanlake-----	5	American plum, Siberian peashrub	Common hackberry, eastern redcedar	Green ash, honeylocust	Siberian elm-----	---
Webster-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L101C2: Omsrud, eroded-----	40	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hawick-----	30	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Storden, eroded-----	20	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L101C2: Delft-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxlant cottonwood, eastern cottonwood
Terril-----	5	Redosier dogwood---	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxlant cottonwood
L101D2: Omsrud, eroded-----	40	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxlant cottonwood, Carolina poplar
Hawick-----	25	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, Russian-olive, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Storden, eroded-----	20	American plum, Siberian peashrub	Cotoneaster-----	Common hackberry, eastern redcedar, green ash, honeylocust, sugar maple	---	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L101D2: Ridgeton-----	6	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Delft-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Terril-----	4	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L102C2: Omsrud, eroded-----	45	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L102C2: Storden, eroded-----	25	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
Omsrud-----	15	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Terril-----	10	Redosier dogwood----	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxland cottonwood
Delft-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspens, silver maple, Siouxland cottonwood, eastern cottonwood
L102D2: Omsrud, eroded-----	45	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L102D2: Storden, eroded-----	20	American plum, Siberian peashrub	Cotoneaster-----	Common hackberry, eastern redcedar, green ash, honeylocust, sugar maple	---	---
Omsrud-----	15	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Ridgeton-----	8	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Delft-----	6	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L102D2: Terril-----	6	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L103A: Fieldon-----	50	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Canisteo-----	35	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Darfur-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Glencoe-----	5	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L105C2: Lester, eroded-----	45	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hawick-----	35	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Terril-----	10	Redosier dogwood---	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxland cottonwood
Hamel-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Storden, eroded-----	5	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L105D2: Lester, eroded-----	45	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hawick-----	35	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Ridgeton-----	8	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hamel-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L105D2: Storden, eroded-----	5	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
Terril-----	2	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L106C2: Lester, eroded-----	62	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Storden, eroded-----	20	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
Terril-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L106C2: Hamel-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Reedslake-----	3	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
L106D2: Lester, eroded-----	62	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Storden, eroded-----	20	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L106D2: Ridgeton-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Terril-----	5	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hamel-----	3	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L107A: Canisteo-----	50	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Glencoe-----	35	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L107A: Harps-----	10	Redosier dogwood----	Common lilac, eastern arborvitae	Blue spruce, eastern redcedar, white spruce, common hackberry	Green ash, golden willow, honeylocust	Eastern cottonwood
Canisteo, depressional--	3	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Crippin-----	2	---	American plum, Siberian peashrub, common chokecherry, common lilac, sargent crabapple, silver buffaloberry, cotoneaster, gray dogwood	Eastern redcedar, white spruce, Black Hills spruce, Amur maple, Norway spruce, common hackberry, ponderosa pine	Green ash, honeylocust, golden willow	Eastern cottonwood, Siouxland cottonwood
L108A: Cordova-----	65	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Rolfe-----	30	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Le Sueur-----	5	---	Common lilac, redosier dogwood	Eastern arborvitae, white spruce, Amur maple, blue spruce	Austrian pine, eastern white pine, common hackberry, green ash	Silver maple

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L109A: Marna-----	65	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Barbert-----	30	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Guckeen-----	5	---	Siberian peashrub, common lilac	Bur oak, eastern arborvitae, eastern redcedar, white spruce, Austrian pine, common hackberry	Eastern white pine, green ash	---
L110E: Lester-----	50	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L110E: Ridgeton-----	30	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Cokato-----	10	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Belview-----	6	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---
Hamel-----	2	---	American plum-----	Amur maple, redosier dogwood, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
Terril-----	2	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L110F: Lester-----	55	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Ridgeton-----	30	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Cokato-----	8	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Belview-----	4	American plum, common lilac	Siberian peashrub, Black Hills spruce, common hackberry, eastern redcedar	Green ash, ponderosa pine, honeylocust	Eastern cottonwood	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L110F: Terril-----	2	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Hamel-----	1	---	American plum-----	Amur maple, redosier dogwood, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
L111A: Nicollet-----	85	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Clarion-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L111A: Webster-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L112A: Webster-----	85	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Glencoe-----	10	Redosier dogwood---	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Nicollet-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L113B: Reedslake-----	75	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Le Sueur-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Reedslake, eroded-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Cordova-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L114A: Hanlon, rarely flooded--	85	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Coland, occasionally flooded-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Minneopa, rarely flooded	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L115A: Brownton-----	55	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Lura-----	35	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L115A: Marna-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxi-land cottonwood, eastern cottonwood
L116A: Le Sueur-----	45	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxi-land cottonwood
Lerdal-----	40	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood
Mazaska-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxi-land cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L116A: Kilkenny-----	5	Nanking cherry-----	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, common lilac	Black Hills spruce, blue spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine	Green ash-----	Silver maple, eastern cottonwood, Siouxland cottonwood
L117C2: Omsrud, eroded-----	65	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Omsrud-----	15	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Terril-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L117C2: Delft-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Storden, eroded-----	5	American plum, Siberian peashrub	Cotoneaster-----	Common hackberry, eastern redcedar, green ash, honeylocust, sugar maple	---	---
L118A: Rushriver, frequently flooded-----	85	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Houghton, frequently flooded-----	5	---	---	---	---	---
Klossner, frequently flooded-----	5	---	---	---	---	---
Medo, frequently flooded	5	Common ninebark----	Amur privet, nannyberry	---	Golden willow-----	---
L119B: Angus-----	80	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L119B: Angus, eroded-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Cordova-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Le Sueur-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L120A: Good Thunder-----	80	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L120A: Ocheyedan-----	10	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Minnetonka-----	10	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L121B: Clarion-----	80	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Guckeen-----	15	---	Siberian peashrub, common lilac	Bur oak, eastern arborvitae, eastern redcedar, white spruce, Austrian pine, common hackberry	Eastern white pine, green ash	---

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L121B: Marna-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
L122B: Reedslake-----	55	---	American cranberrybush, common chokecherry, cotoneaster, sargent crabapple, silver buffaloberry, American plum, Amur maple, Siberian peashrub, common lilac	Black Hills spruce, eastern redcedar, white spruce, Norway spruce, ponderosa pine, eastern white pine, red pine	Green ash, honeylocust, jack pine	Silver maple, eastern cottonwood, quaking aspen, Siouxland cottonwood, Carolina poplar
Estherville-----	25	Siberian peashrub---	American plum, common chokecherry, common lilac, sargent crabapple, silver buffaloberry	Black Hills spruce, eastern redcedar, jack pine, ponderosa pine, white spruce, Austrian pine, green ash, silver maple	Eastern white pine, red pine, Scotch pine, eastern cottonwood	---
Le Sueur-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L122B: Cordova-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouland cottonwood, eastern cottonwood
Lowlein-----	5	---	Common lilac, redosier dogwood	Eastern arborvitae, white spruce, Amur maple, blue spruce	Austrian pine, eastern white pine, common hackberry, green ash	Silver maple
L123A: Belleville-----	85	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Granby-----	15	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
L124A: Glencoe mucky clay loam	85	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Canisteo-----	10	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Glencoe clay loam-----	5	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L125A: Hanlon, rarely flooded--	60	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Coland, occasionally flooded-----	25	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Minneopa, rarely flooded	15	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L126A: Coland, occasionally flooded-----	80	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L126A: Minneopa, occasionally flooded-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
Havelock, occasionally flooded-----	5	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Spillville, occasionally flooded-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L127A: Coland, frequently flooded-----	80	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Minneopa, occasionally flooded-----	10	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L127A: Havelock, frequently flooded-----	5	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Spillville, occasionally flooded-----	5	---	Nanking cherry, Siberian peashrub, common chokecherry, redosier dogwood, sargent crabapple, silver buffaloberry, American plum, common lilac	Black Hills spruce, Norway spruce, white spruce, eastern redcedar, ponderosa pine, Amur maple, common hackberry, red pine	American basswood, Austrian pine, eastern white pine, northern red oak, green ash	Silver maple, eastern cottonwood, Siouxland cottonwood
L128A: Mazaska-----	60	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Rolfe-----	30	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Lerdal-----	10	Hedge cotoneaster---	American cranberrybush, Siberian peashrub, common chokecherry, common lilac, cotoneaster, American plum, silver buffaloberry	Black Hills spruce, Siberian crabapple, eastern redcedar, white spruce, Amur maple, Austrian pine, ponderosa pine, common hackberry, eastern white pine, red pine	Green ash, jack pine	Silver maple, eastern cottonwood

Table 6.--Windbreaks and Environmental Plantings--Continued

Map symbol and component name	Pct. of map unit	Trees having predicted 20-year average height, in feet, of--				
		<8	8-15	16-25	26-35	>35
L129B:						
Terril-----	90	Redosier dogwood----	Siberian peashrub, American plum, common lilac, prunus, silver buffaloberry	Eastern redcedar, Amur maple, Black Hills spruce, Norway spruce	Honeylocust, jack pine, black walnut, common hackberry, eastern white pine, green ash	Silver maple, Siouxland cottonwood
Delft-----	5	---	American cranberrybush, cotoneaster, sargent crabapple, white spruce, Siberian peashrub, common lilac, eastern redcedar, redosier dogwood, silver buffaloberry	American plum, Black Hills spruce, ponderosa pine, common hackberry, tall purple willow	Eastern white pine, golden willow	Green ash, quaking aspen, silver maple, Siouxland cottonwood, eastern cottonwood
Hamel-----	5	---	American plum-----	Amur maple, redosier dogwood, eastern arborvitae, white spruce, common hackberry, tall purple willow	Golden willow-----	Green ash, silver maple, eastern cottonwood
L130A:						
Okoboji mucky silty clay loam-----	75	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Okoboji silty clay loam	15	Redosier dogwood----	Silky dogwood-----	Tamarack, green ash, northern whitecedar, black ash, tall purple willow	Black willow, golden willow	Eastern cottonwood
Brownston-----	5	Redosier dogwood----	Gray dogwood, silky dogwood	Northern whitecedar, black ash, tall purple willow	Black willow, golden willow, white willow	Eastern cottonwood
Spicer-----	5	---	---	---	---	---

Table 7.--Windbreak Suitability Groups

(Suitable shrubs and trees with their mature heights are listed in table 6. Absence of an entry indicates that a windbreak suitability group is not assigned)

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L5A:		
Delft, overwash-----	50	2
Delft-----	40	2
Glencoe-----	5	2
Terril-----	5	3
L13A:		
Klossner, drained-----	80	2H
Mineral soil, drained	15	2
Houghton, drained-----	5	2H
L14A:		
Houghton, drained-----	80	2H
Klossner, drained-----	10	2H
Mineral soil, drained	10	2
L15A:		
Klossner, ponded-----	30	10
Okoboji, ponded-----	30	10
Glencoe, ponded-----	30	10
Houghton, ponded-----	10	10
L16A:		
Muskego, ponded-----	30	10
Blue Earth, ponded-----	30	10
Houghton, ponded-----	30	10
Klossner, ponded-----	10	10
L26B:		
Shorewood-----	90	4
Good Thunder-----	5	4
Minnetonka-----	5	2
L36A:		
Hamel, overwash-----	50	1
Hamel-----	43	2
Terril-----	5	3
Glencoe-----	2	2

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L40B:		
Angus-----	45	3
Kilkenny-----	40	3
Lerdal-----	10	4
Mazaska-----	5	2
L41C2:		
Lester, eroded-----	45	3
Kilkenny, eroded-----	40	3
Terril-----	10	3
Derrynane-----	5	2
L41D2:		
Lester, eroded-----	45	3
Kilkenny, eroded-----	35	3
Terril-----	10	3
Derrynane-----	5	2
Ridgeton-----	5	3
L41E:		
Lester-----	45	3
Kilkenny-----	40	3
Terril-----	5	3
Derrynane-----	5	2
Ridgeton-----	5	3
L48A:		
Derrynane, overwash---	50	2
Derrynane-----	40	2
Glencoe-----	5	2
Terril-----	5	3
L49A:		
Klossner, surface drained-----	65	10
Klossner, drained-----	20	2H
Mineral soil, drained	15	2

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L50A:		
Houghton, surface drained-----	40	10
Muskego, surface drained-----	40	10
Klossner, drained----	10	2H
Mineral soil, drained	10	2
L51C2:		
Gladek, eroded-----	80	3
Barrington-----	10	3
Lester, eroded-----	5	3
Madelia-----	5	2
L56A:		
Muskego, frequently flooded-----	45	10
Klossner, frequently flooded-----	45	10
Suckercreek, frequently flooded---	10	10
L57A:		
Medo, drained-----	80	2H
Mineral soil, drained	15	2
Houghton, drained----	5	2H
L63A:		
Klossner-----	85	2
Lura-----	10	2
Brownnton-----	5	2K
L64A:		
Tadkee-----	50	10
Tadkee, depressiona--	36	10
Better drained soil---	8	1
Granby-----	4	10
Less sandy soil-----	2	10
L73A:		
Blue Earth-----	80	2K
Belleville-----	10	2K
Canisteco-----	10	2K

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L74A:		
Estherville-----	87	7
Hawick-----	10	7
Biscay-----	3	2
L75B:		
Barrington-----	85	3
Gladek-----	10	3
Madelia-----	5	2
L76B:		
Dickinson-----	80	5
Litchfield-----	13	1
Darfur-----	5	2
Clarion-----	2	3
L77A:		
Brownton-----	75	2K
Marna-----	15	2
Lura-----	10	2
L78A:		
Canisteo-----	65	2K
Crippin-----	10	1K
Glencoe-----	10	2
Canisteo, depressional	5	2
Harps-----	5	2K
Webster-----	5	2
L79B:		
Clarion-----	65	3
Clarion, eroded-----	25	3
Nicollet-----	8	1
Webster-----	2	2
L80C2:		
Lester, eroded-----	75	3
Terril-----	10	3
Hamel-----	5	2
Reedslake-----	5	3
Storden, eroded-----	5	8

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L80D2:		
Lester, eroded-----	75	3
Ridgeton-----	10	3
Storden, eroded-----	8	8
Terril-----	5	3
Hamel-----	2	2
L81A:		
Cordova-----	85	2
Le Sueur-----	10	1
Rolfe-----	5	2
L82A:		
Marna-----	85	2
Barbert-----	10	2
Guckeen-----	5	4
L83A:		
Webster-----	65	2
Glencoe-----	15	2
Canisteo-----	10	2K
Nicollet-----	10	1
L84A:		
Glencoe-----	80	2
Very poorly drained muck-----	10	2
Canisteo-----	5	2K
Harps-----	5	2K
L85A:		
Nicollet-----	85	1
Clarion-----	10	3
Webster-----	5	2
L86A:		
Madelia-----	90	2
Okoboji-----	5	2
Spicer-----	3	2K
Kingston-----	2	1

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L87A:		
Kingston-----	85	1
Truman-----	10	3
Madelia-----	5	2
L88A:		
Lura-----	85	2
Brownton-----	10	2K
Organic soil-----	5	2
L89A:		
Guckeen-----	82	4
Marna-----	10	2
Clarion clay loam----	8	3
L90A:		
Le Sueur-----	75	1
Cordova-----	13	2
Reedslake-----	12	3
L91A:		
Mazaska-----	85	2
Lerdal-----	10	4
Rolfe-----	5	2
L92A:		
Darfur-----	78	2
Fieldon-----	10	2K
Litchfield-----	5	1
Webster-----	5	2
Dassel-----	2	2
L93A:		
Muskego-----	82	2H
Blue Earth-----	10	2K
Mineral soil, drained	5	2
Belleville-----	3	2K
L94A:		
Lowlein-----	75	1
Linder-----	15	1
Dickinson-----	8	5
Darfur-----	2	2

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L95E:		
Hawick-----	80	7
Estherville-----	10	7
Tomall-----	10	3
L96B:		
Estherville-----	55	7
Hawick-----	35	7
Tomall-----	8	3
Biscay-----	2	2
L97C:		
Hawick-----	60	7
Estherville-----	30	7
Tomall-----	10	3
L98A:		
Crippin-----	50	1K
Nicollet-----	40	1
Canisteo-----	5	2K
Clarion-----	5	3
L99B:		
Clarion-----	62	3
Swanlake-----	25	8
Nicollet-----	10	1
Webster-----	3	2
L100B:		
Clarion-----	45	3
Estherville-----	35	7
Lowlein-----	5	1
Nicollet-----	5	1
Swanlake-----	5	8
Webster-----	5	2
L101C2:		
Omsrud, eroded-----	40	3
Hawick-----	30	7
Storden, eroded-----	20	8
Delft-----	5	2
Terril-----	5	3

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L101D2:		
Omsrud, eroded-----	40	3
Hawick-----	25	7
Storden, eroded-----	20	8
Ridgeton-----	6	3
Delft-----	5	2
Terril-----	4	3
L102C2:		
Omsrud, eroded-----	45	3
Storden, eroded-----	25	8
Omsrud-----	15	3
Terril-----	10	3
Delft-----	5	2
L102D2:		
Omsrud, eroded-----	45	3
Storden, eroded-----	20	8
Omsrud-----	15	3
Ridgeton-----	8	3
Delft-----	6	2
Terril-----	6	3
L103A:		
Fieldon-----	50	2K
Canisteo-----	35	2K
Darfur-----	10	2
Glencoe-----	5	2
L105C2:		
Lester, eroded-----	45	3
Hawick-----	35	7
Terril-----	10	3
Hamel-----	5	2
Storden, eroded-----	5	8
L105D2:		
Lester, eroded-----	45	3
Hawick-----	35	7
Ridgeton-----	8	3

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L105D2:		
Hamel-----	5	2
Storden, eroded-----	5	8
Terril-----	2	3
L106C2:		
Lester, eroded-----	62	3
Storden, eroded-----	20	8
Terril-----	10	3
Hamel-----	5	2
Reedslake-----	3	3
L106D2:		
Lester, eroded-----	62	3
Storden, eroded-----	20	8
Ridgeton-----	10	3
Terril-----	5	3
Hamel-----	3	2
L107A:		
Canisteo-----	50	2K
Glencoe-----	35	2
Harps-----	10	2K
Canisteo, depressional	3	2
Crippin-----	2	1K
L108A:		
Cordova-----	65	2
Rolfe-----	30	2
Le Sueur-----	5	1
L109A:		
Marna-----	65	2
Barbert-----	30	2
Guckeen-----	5	4
L110E:		
Lester-----	50	3
Ridgeton-----	30	3
Cokato-----	10	3
Belview-----	6	8

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L110E:		
Hamel-----	2	2
Terril-----	2	3
L110F:		
Lester-----	55	3
Ridgeton-----	30	3
Cokato-----	8	3
Belview-----	4	8
Terril-----	2	3
Hamel-----	1	2
L111A:		
Nicollet-----	85	1
Clarion-----	10	3
Webster-----	5	2
L112A:		
Webster-----	85	2
Glencoe-----	10	2
Nicollet-----	5	1
L113B:		
Reedslake-----	75	3
Le Sueur-----	10	1
Reedslake, eroded----	10	3
Cordova-----	5	2
L114A:		
Hanlon, rarely flooded	85	1
Coland, occasionally flooded-----	10	2
Minneopa, rarely flooded-----	5	1
L115A:		
Brownton-----	55	2K
Lura-----	35	2
Marna-----	10	2
L116A:		
Le Sueur-----	45	1
Lerdal-----	40	4

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L116A:		
Mazaska-----	10	2
Kilkenny-----	5	3
L117C2:		
Omsrud, eroded-----	65	3
Omsrud-----	15	3
Terril-----	10	3
Delft-----	5	2
Storden, eroded-----	5	8
L118A:		
Rushriver, frequently flooded-----	85	2K
Houghton, frequently flooded-----	5	2H
Klossner, frequently flooded-----	5	2H
Medo, frequently flooded-----	5	2
L119B:		
Angus-----	80	3
Angus, eroded-----	10	3
Cordova-----	5	2
Le Sueur-----	5	1
L120A:		
Good Thunder-----	80	4
Ocheyedan-----	10	3
Minnetonka-----	10	2
L121B:		
Clarion-----	80	3
Guckeen-----	15	4
Marna-----	5	2
L122B:		
Reedslake-----	55	3
Estherville-----	25	7
Le Sueur-----	10	1
Cordova-----	5	2
Lowlein-----	5	1

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L123A:		
Belleville-----	85	2K
Granby-----	15	2
L124A:		
Glencoe mucky clay loam-----	85	2
Canisteo-----	10	2K
Glencoe clay loam----	5	2
L125A:		
Hanlon, rarely flooded	60	1
Coland, occasionally flooded-----	25	2
Minneopa, rarely flooded-----	15	1
L126A:		
Coland, occasionally flooded-----	80	2
Minneopa, occasionally flooded-----	10	1
Havelock, occasionally flooded-----	5	2K
Spillville, occasionally flooded	5	1
L127A:		
Coland, frequently flooded-----	80	2
Minneopa, occasionally flooded-----	10	1
Havelock, frequently flooded-----	5	2K
Spillville, occasionally flooded	5	1
L128A:		
Mazaska-----	60	2
Rolfe-----	30	2
Lerdal-----	10	4
L129B:		
Terril-----	90	3
Delft-----	5	2
Hamel-----	5	2

Table 7.--Windbreak Suitability Groups--Continued

Map symbol and component name	Pct. of map unit	Windbreak suitability group
L130A:		
Okoboji mucky silty clay loam-----	75	2
Okoboji silty clay loam-----	15	2
Brownton-----	5	2K
Spicer-----	5	2K

Table 8a.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsammments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash-----	50	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	0.75	Depth to saturated zone	0.98
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
Delft-----	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
Glencoe-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
Terril-----	5	Somewhat limited		Not limited		Somewhat limited	
		Depth to saturated zone	0.01			Slope	0.50
						Depth to saturated zone	0.01
L13A:							
Klossner, drained---	80	Very limited		Very limited		Very limited	
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
Mineral soil, drained-----	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
Houghton, drained---	5	Very limited		Very limited		Very limited	
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
L14A:							
Houghton, drained---	80	Very limited		Very limited		Very limited	
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Klossner, drained---	10	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
L15A: Klossner, ponded----	30	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	 1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.15	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.15	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.15
Glencoe, ponded-----	30	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, ponded----	10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	 1.00 1.00 1.00
L16A: Muskego, ponded-----	30	Very limited Ponding Content of organic matter Depth to saturated zone Restricted permeability	 1.00 1.00 1.00 0.96	Very limited Ponding Content of organic matter Depth to saturated zone Restricted permeability	 1.00 1.00 1.00 0.96	Very limited Content of organic matter Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00 0.96
Blue Earth, ponded--	30	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L16A: Houghton, ponded----	30	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00
Klossner, ponded----	10	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00
L26B: Shorewood-----	90	Somewhat limited Depth to saturated zone Restricted permeability	0.98 0.60	Somewhat limited Depth to saturated zone Restricted permeability	0.75 0.60	Somewhat limited Depth to saturated zone Restricted permeability Slope	0.98 0.60 0.50
Good Thunder-----	5	Somewhat limited Restricted permeability Depth to saturated zone	0.43 0.01	Somewhat limited Restricted permeability	0.43	Somewhat limited Restricted permeability Slope Depth to saturated zone	0.43 0.03 0.01
Minnetonka-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L36A: Hamel, overwash----	50	Somewhat limited Depth to saturated zone Restricted permeability	0.98 0.21	Somewhat limited Depth to saturated zone Restricted permeability	0.75 0.21	Somewhat limited Depth to saturated zone Restricted permeability	0.98 0.21
Hamel-----	43	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Terril-----	5	Not limited		Not limited		Somewhat limited Slope	0.12
Glencoe-----	2	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L40B: Angus-----	45	Not limited		Not limited		Somewhat limited Slope	0.50

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L40B: Kilkenny-----	40	Somewhat limited Depth to saturated zone Restricted permeability	0.88 0.21	Somewhat limited Depth to saturated zone Restricted permeability	0.56 0.21	Somewhat limited Depth to saturated zone Restricted permeability Slope	0.88 0.21 0.12
Lerdal-----	10	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.60	Somewhat limited Restricted permeability Depth to saturated zone Slope	0.94 0.90 0.03
Mazaska-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L41C2: Lester, eroded-----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Kilkenny, eroded----	40	Somewhat limited Restricted permeability Slope	0.21 0.04	Somewhat limited Restricted permeability Slope	0.21 0.04	Very limited Slope Restricted permeability	1.00 0.21
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.12
Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
L41D2: Lester, eroded-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kilkenny, eroded----	35	Very limited Slope Restricted permeability	1.00 0.21	Very limited Slope Restricted permeability	1.00 0.21	Very limited Slope Restricted permeability	1.00 0.21
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.12
Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Ridgeton-----	5	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41E:							
Lester-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Kilkenny-----	40	Very limited Slope Restricted permeability	1.00 0.21	Very limited Slope Restricted permeability	1.00 0.21	Very limited Slope Restricted permeability	1.00 0.21
Terril-----	5	Not limited		Not limited		Somewhat limited Slope	0.12
Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Ridgeton-----	5	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
L48A:							
Derrynane, overwash	50	Somewhat limited Depth to saturated zone Restricted permeability	0.98 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.75 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.98 0.43
Derrynane-----	40	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Glencoe-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Terril-----	5	Not limited		Not limited		Somewhat limited Slope	0.50
L49A:							
Klossner, surface drained-----	65	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Klossner, drained---	20	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L49A: Mineral soil, drained-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L50A: Houghton, surface drained-----	40	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Content of organic matter Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00 0.96	Very limited Content of organic matter Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00 0.96	Very limited Content of organic matter Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00 0.96
Klossner, drained---	10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L51C2: Gladek, eroded-----	80	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Barrington-----	10	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.50 0.01
Lester, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L56A: Muskego, frequently flooded-----	45	Very limited Flooding Ponding Content of organic matter Depth to saturated zone Restricted permeability	 1.00 1.00 1.00 1.00 0.96	Very limited Ponding Content of organic matter Depth to saturated zone Restricted permeability Flooding	 1.00 1.00 1.00 1.00 0.96 0.40	Very limited Content of organic matter Flooding Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00 1.00 0.96
Klossner, frequently flooded-----	45	Very limited Flooding Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Flooding	 1.00 1.00 1.00 1.00 0.40	Very limited Content of organic matter Flooding Ponding Depth to saturated zone	 1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Flooding	 1.00 0.40	Very limited Flooding Depth to saturated zone	 1.00 1.00
L57A: Medo, drained-----	80	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	 1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, drained---	5	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	 1.00 1.00 1.00
L63A: Klossner-----	85	Very limited Depth to saturated zone Ponding Content of organic matter	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter	 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	 1.00 1.00 1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L63A: Lura-----	10	Very limited Depth to saturated zone Ponding Too clayey Restricted permeability	1.00 1.00 1.00 0.94	Very limited Too clayey Ponding Depth to saturated zone Restricted permeability	1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Too clayey Ponding Restricted permeability	1.00 1.00 1.00 0.94
Brownston-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
L64A: Tadkee-----	50	Very limited Depth to saturated zone Too sandy	1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 0.89
Tadkee, depressiona	36	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89
Better drained soil	8	Somewhat limited Too sandy Depth to saturated zone	0.46 0.01	Somewhat limited Too sandy	0.46	Somewhat limited Too sandy Slope Depth to saturated zone	0.46 0.03 0.01
Granby-----	4	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89
Less sandy soil----	2	Very limited Depth to saturated zone Too sandy	1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 0.89
L73A: Blue Earth-----	80	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Belleville-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Canisteeo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L74A:							
Estherville-----	87	Not limited		Not limited		Not limited	
Hawick-----	10	Not limited		Not limited		Somewhat limited Gravel content Slope	0.90 0.12
Biscay-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L75B:							
Barrington-----	85	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.50 0.01
Gladek-----	10	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L76B:							
Dickinson-----	80	Not limited		Not limited		Somewhat limited Slope	0.50
Litchfield-----	13	Very limited Depth to saturated zone Too sandy	1.00 0.92	Somewhat limited Too sandy Depth to saturated zone	0.92 0.90	Very limited Depth to saturated zone Too sandy	1.00 0.92
Darfur-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	2	Not limited		Not limited		Somewhat limited Slope	0.50
L77A:							
Brownnton-----	75	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Marna-----	15	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Lura-----	10	Very limited Depth to saturated zone Ponding Too clayey Restricted permeability	1.00 1.00 1.00 0.94	Very limited Too clayey Ponding Depth to saturated zone Restricted permeability	1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Too clayey Ponding Restricted permeability	1.00 1.00 1.00 0.94

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A:							
Canisteo-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Crippin-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Glencoe-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canisteo, depressional-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L79B:							
Clarion-----	65	Not limited		Not limited		Somewhat limited Slope	0.50
Clarion, eroded----	25	Not limited		Not limited		Somewhat limited Slope	0.50
Nicollet-----	8	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Webster-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L80C2:							
Lester, eroded-----	75	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.88
Hamel-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.21 0.12
Reedslake-----	5	Not limited		Not limited		Somewhat limited Slope	0.50

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80C2: Storden, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
L80D2: Lester, eroded-----	75	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Storden, eroded-----	8	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Terril-----	5	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.88 0.01
Hamel-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability Slope	0.21 0.12
L81A: Cordova-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
Le Sueur-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Rolfe-----	5	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
L82A: Marna-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.96	Restricted permeability	0.96	Restricted permeability	0.96
Barbert-----	10	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	0.94	Restricted permeability	0.94	Restricted permeability	0.94

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L82A: Guckeen-----	5	Somewhat limited Restricted permeability Depth to saturated zone	0.43 0.01	Somewhat limited Restricted permeability	0.43	Somewhat limited Restricted permeability Depth to saturated zone	0.43 0.01
L83A: Webster-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canistee-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L84A: Glencoe-----	80	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Very poorly drained muck-----	10	Very limited Depth to saturated zone Ponding Content of organic matter	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
Canistee-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L85A: Nicollet-----	85	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Clarion-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L86A: Madelia-----	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Okoboji-----	5	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.15	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15
Spicer-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Kingston-----	2	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L87A: Kingston-----	85	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Truman-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L88A: Lura-----	85	Very limited Depth to saturated zone Ponding Too clayey Restricted permeability	1.00 1.00 1.00 0.94	Very limited Too clayey Ponding Depth to saturated zone Restricted permeability	1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Too clayey Ponding Restricted permeability	1.00 1.00 1.00 0.94
Brownton-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Organic soil-----	5	Very limited Depth to saturated zone Ponding Content of organic matter	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
L89A: Guckeen-----	82	Very limited Depth to saturated zone Restricted permeability	0.99 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.78 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.99 0.43

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L89A: Marna-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Clarion clay loam---	8	Not limited		Not limited		Somewhat limited Slope	0.50
L90A: Le Sueur-----	75	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Cordova-----	13	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Reedslake-----	12	Not limited		Not limited		Somewhat limited Slope	0.50
L91A: Mazaska-----	85	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Lerdal-----	10	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.60	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90
Rolfe-----	5	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96
L92A: Darfur-----	78	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Fieldon-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Litchfield-----	5	Very limited Depth to saturated zone Too sandy	1.00 0.92	Somewhat limited Too sandy Depth to saturated zone	0.92 0.90	Very limited Depth to saturated zone Too sandy	1.00 0.92
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Dassel-----	2	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L93A: Muskego-----	82	Very limited Depth to saturated zone Ponding Content of organic matter Restricted permeability	1.00 1.00 1.00 0.94	Very limited Ponding Depth to saturated zone Content of organic matter Restricted permeability	1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Content of organic matter Ponding Restricted permeability	1.00 1.00 1.00 0.94
Blue Earth-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Mineral soil, drained-----	5	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Belleville-----	3	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L94A: Lowlein-----	75	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
Linder-----	15	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.90	Very limited Depth to saturated zone	1.00
Dickinson-----	8	Not limited		Not limited		Somewhat limited Slope	0.50
Darfur-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L95E: Hawick-----	80	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 0.01	Very limited Slope Gravel content	1.00 1.00
Estherville-----	10	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Tomall-----	10	Not limited		Not limited		Not limited	

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L96B:							
Estherville-----	55	Not limited		Not limited		Somewhat limited Slope	0.50
Hawick-----	35	Not limited		Not limited		Somewhat limited Gravel content Slope	0.90 0.50
Tomall-----	8	Not limited		Not limited		Not limited	
Biscay-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L97C:							
Hawick-----	60	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.90
Estherville-----	30	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Tomall-----	10	Not limited		Not limited		Not limited	
L98A:							
Crippin-----	50	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Nicollet-----	40	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Canisteo-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	5	Not limited		Not limited		Somewhat limited Slope	0.50
L99B:							
Clarion-----	62	Not limited		Not limited		Somewhat limited Slope	0.50
Swanlake-----	25	Not limited		Not limited		Somewhat limited Slope	0.88
Nicollet-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Webster-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L100B:							
Clarion-----	45	Not limited		Not limited		Somewhat limited Slope	0.50
Estherville-----	35	Not limited		Not limited		Somewhat limited Slope	0.50

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L100B:							
Lowlein-----	5	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
Nicollet-----	5	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Swanlake-----	5	Not limited		Not limited		Somewhat limited Slope	0.50
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L101C2:							
Omsrud, eroded----	40	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Hawick-----	30	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.90
Storden, eroded----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Delft-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Terril-----	5	Not limited		Not limited		Somewhat limited Slope	0.50
L101D2:							
Omsrud, eroded----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hawick-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.90
Storden, eroded----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	6	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Delft-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Terril-----	4	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.88 0.01

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102C2:							
Omsrud, eroded-----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Storden, eroded-----	25	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
L102D2:							
Omsrud, eroded-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Omsrud-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Delft-----	6	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Restricted permeability	0.15	Restricted permeability	0.15	Restricted permeability	0.15
Terril-----	6	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.88 0.01
L103A:							
Fieldon-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone	1.00	Very limited Ponding Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Ponding	1.00			Ponding	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105C2:							
Lester, eroded-----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Hawick-----	35	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.90
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Hamel-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Storden, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
L105D2:							
Lester, eroded-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hawick-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.90
Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Hamel-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Storden, eroded-----	5	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Terril-----	2	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.88 0.01
L106C2:							
Lester, eroded-----	62	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Storden, eroded-----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Hamel-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106C2: Reedslake-----	3	Not limited		Not limited		Somewhat limited Slope	0.50
L106D2: Lester, eroded-----	62	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Terril-----	5	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Slope Depth to saturated zone	0.88 0.01
Hamel-----	3	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L107A: Canisteo-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Harps-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Crippin-----	2	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L108A: Cordova-----	65	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L108A: Rolfe-----	30	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96
Le Sueur-----	5	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L109A: Marna-----	65	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Barbert-----	30	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.94	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94
Guckeen-----	5	Very limited Depth to saturated zone Restricted permeability	0.99 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.78 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.99 0.43
L110E: Lester-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cokato-----	10	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Belview-----	6	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hamel-----	2	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.21 0.12
Terril-----	2	Not limited		Not limited		Somewhat limited Slope	0.88
L110F: Lester-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110F: Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cokato-----	8	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Belview-----	4	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Terril-----	2	Not limited		Not limited		Somewhat limited Slope	0.88
Hamel-----	1	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.21 0.12
L111A: Nicollet-----	85	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Clarion-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L112A: Webster-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Nicollet-----	5	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L113B: Reedslake-----	75	Not limited		Not limited		Somewhat limited Slope	0.50
Le Sueur-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Reedslake, eroded---	10	Not limited		Not limited		Somewhat limited Slope	0.88

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L113B: Cordova-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L114A: Hanlon, rarely flooded-----	85	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
Coland, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
L115A: Brownton-----	55	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Lura-----	35	Very limited Depth to saturated zone Ponding Too clayey Restricted permeability	1.00 1.00 1.00 0.94	Very limited Too clayey Ponding Depth to saturated zone Restricted permeability	1.00 1.00 1.00 0.94	Very limited Depth to saturated zone Too clayey Ponding Restricted permeability	1.00 1.00 1.00 0.94
Marna-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L116A: Le Sueur-----	45	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Lerdal-----	40	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.60	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L116A: Mazaska-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Kilkenny-----	5	Somewhat limited Depth to saturated zone Restricted permeability	0.88 0.21	Somewhat limited Depth to saturated zone Restricted permeability	0.56 0.21	Somewhat limited Depth to saturated zone Restricted permeability Slope	0.88 0.21 0.12
L117C2: Omsrud, eroded----	65	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Not limited		Very limited Slope	1.00
Delft-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Storden, eroded----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
L118A: Rushriver, frequently flooded	85	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding Gravel content	1.00 1.00 0.50
Houghton, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Content of organic matter	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 1.00
Klossner, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Content of organic matter	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L118A: Medo, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Content of organic matter	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 1.00
L119B: Angus-----	80	Not limited		Not limited		Somewhat limited Slope	0.50
Angus, eroded-----	10	Not limited		Not limited		Somewhat limited Slope	0.50
Cordova-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Le Sueur-----	5	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
L120A: Good Thunder-----	80	Somewhat limited Restricted permeability Depth to saturated zone	0.43 0.01	Somewhat limited Restricted permeability	0.43	Somewhat limited Restricted permeability Depth to saturated zone	0.43 0.01
Ocheyedan-----	10	Not limited		Not limited		Somewhat limited Slope	0.12
Minnetonka-----	10	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L121B: Clarion-----	80	Not limited		Not limited		Somewhat limited Slope	0.50
Guckeen-----	15	Very limited Depth to saturated zone Restricted permeability	0.99 0.43	Somewhat limited Depth to saturated zone Restricted permeability	0.78 0.43	Somewhat limited Depth to saturated zone Restricted permeability Slope	0.99 0.43 0.12
Marna-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L122B: Reedslake-----	55	Not limited		Not limited		Somewhat limited Slope	0.50
Estherville-----	25	Not limited		Not limited		Somewhat limited Slope	0.50
Le Sueur-----	10	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.99
Cordova-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Lowlein-----	5	Somewhat limited Depth to saturated zone	0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
L123A: Belleville-----	85	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Granby-----	15	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89	Very limited Ponding Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89
L124A: Glencoe mucky clay loam-----	85	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe clay loam---	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L125A: Hanlon, rarely flooded-----	60	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L125A: Coland, occasionally flooded-----	25	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	15	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
L126A: Coland, occasionally flooded-----	80	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
Havelock, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone Flooding	0.99 0.60
L127A: Coland, frequently flooded-----	80	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Minneopa, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone	1.00 0.01	Not limited		Somewhat limited Depth to saturated zone	0.01
Havelock, frequently flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 0.99	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone Flooding	0.99 0.60
L128A: Mazaska-----	60	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Rolfe-----	30	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.96	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.96
Lerdal-----	10	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.60	Somewhat limited Restricted permeability Depth to saturated zone	0.94 0.90
L129B: Terril-----	90	Not limited		Not limited		Somewhat limited Slope	0.50
Delft-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Hamel-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L130A: Okobojo mucky silty clay loam-----	75	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.21	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.21	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.21
Okobojo silty clay loam-----	15	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15	Very limited Ponding Depth to saturated zone Restricted permeability	1.00 1.00 0.15	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15

Table 8a.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L130A: Brownton-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Spicer-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

Table 8b.--Recreation

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash----	50	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
Delft-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding saturated zone	1.00 1.00
Terril-----	5	Not limited		Not limited		Not limited	
L13A:							
Klossner, drained---	80	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Houghton, drained---	5	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
L14A:							
Houghton, drained---	80	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Klossner, drained---	10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L15A: Klossner, ponded----	30	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Glencoe, ponded-----	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Houghton, ponded----	10	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
L16A: Muskego, ponded-----	30	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Carbonate content Depth to saturated zone	1.00 1.00 1.00 1.00
Blue Earth, ponded--	30	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Houghton, ponded----	30	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L16A: Klossner, ponded----	10	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
L26B: Shorewood-----	90	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
Good Thunder-----	5	Not limited		Not limited		Not limited	
Minnetonka-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L36A: Hamel, overwash----	50	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
Hamel-----	43	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Terril-----	5	Not limited		Not limited		Not limited	
Glencoe-----	2	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L40B: Angus-----	45	Not limited		Not limited		Not limited	
Kilkenny-----	40	Somewhat limited Depth to saturated zone	0.18	Somewhat limited Depth to saturated zone	0.18	Somewhat limited Depth to saturated zone	0.56
Lerdal-----	10	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.60
Mazaska-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L41C2: Lester, eroded-----	45	Not limited		Not limited		Somewhat limited Slope	0.04
Kilkenny, eroded----	40	Not limited		Not limited		Somewhat limited Slope	0.04
Terril-----	10	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41C2: Derrynane-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L41D2: Lester, eroded-----	45	Not limited		Not limited		Very limited Slope	1.00
Kilkenny, eroded----	35	Not limited		Not limited		Very limited Slope	1.00
Terril-----	10	Not limited		Not limited		Not limited	
Derrynane-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Ridgeton-----	5	Not limited		Not limited		Somewhat limited Slope	0.16
L41E: Lester-----	45	Somewhat limited Slope	0.82	Not limited		Very limited Slope	1.00
Kilkenny-----	40	Somewhat limited Slope	0.82	Not limited		Very limited Slope	1.00
Terril-----	5	Not limited		Not limited		Not limited	
Derrynane-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Ridgeton-----	5	Not limited		Not limited		Somewhat limited Slope	0.96
L48A: Derrynane, overwash	50	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
Derrynane-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Terril-----	5	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L49A: Klossner, surface drained-----	65	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Klossner, drained---	20	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L50A: Houghton, surface drained-----	40	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Carbonate content Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L51C2: Gladek, eroded-----	80	Not limited		Not limited		Somewhat limited Slope	0.04
Barrington-----	10	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L51C2: Lester, eroded-----	5	Not limited		Not limited		Somewhat limited Slope	0.04
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L56A: Muskego, frequently flooded-----	45	Very limited Content of organic matter Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.40	Very limited Content of organic matter Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 0.40	Very limited Ponding Flooding Content of organic matter Carbonate content Depth to saturated zone	1.00 1.00 1.00 1.00 1.00
Klossner, frequently flooded-----	45	Very limited Content of organic matter Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Content of organic matter Ponding Depth to saturated zone Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Ponding Flooding Content of organic matter Depth to saturated zone	1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
L57A: Medo, drained-----	80	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Houghton, drained---	5	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L63A: Klossner-----	85	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00 1.00
Lura-----	10	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00 1.00	Very limited Too clayey Ponding Depth to saturated zone	1.00 1.00 1.00 1.00
Brownston-----	5	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00
L64A: Tadkee-----	50	Very limited Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone	1.00 1.00
Tadkee, depressiona	36	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00 0.89	Very limited Ponding Depth to saturated zone	1.00 1.00 1.00
Better drained soil	8	Somewhat limited Too sandy	0.46 0.46	Somewhat limited Too sandy	0.46 0.46	Not limited	
Granby-----	4	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 1.00 0.89	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 1.00 0.13
Less sandy soil----	2	Very limited Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone	1.00 1.00
L73A: Blue Earth-----	80	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00 1.00
Belleville-----	10	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00 1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L74A:							
Estherville-----	87	Not limited		Not limited		Somewhat limited Droughty	0.12
Hawick-----	10	Not limited		Not limited		Very limited Droughty	1.00
Biscay-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L75B:							
Barrington-----	85	Not limited		Not limited		Not limited	
Gladek-----	10	Not limited		Not limited		Somewhat limited Slope	0.04
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L76B:							
Dickinson-----	80	Not limited		Not limited		Not limited	
Litchfield-----	13	Somewhat limited Too sandy Depth to saturated zone	0.92 0.78	Somewhat limited Too sandy Depth to saturated zone	0.92 0.78	Somewhat limited Depth to saturated zone	0.90
Darfur-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	2	Not limited		Not limited		Not limited	
L77A:							
Brownston-----	75	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Marna-----	15	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Lura-----	10	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00	Very limited Too clayey Ponding Depth to saturated zone	1.00 1.00 1.00
L78A:							
Canisteo-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Crippin-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A:							
Glencoe-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00 1.00
Canisteo, depressional-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00 1.00
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L79B:							
Clarion-----	65	Not limited		Not limited		Not limited	
Clarion, eroded-----	25	Not limited		Not limited		Not limited	
Nicollet-----	8	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Webster-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L80C2:							
Lester, eroded-----	75	Not limited		Not limited		Somewhat limited Slope	0.04
Terril-----	10	Not limited		Not limited		Not limited	
Hamel-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Reedslake-----	5	Not limited		Not limited		Not limited	
Storden, eroded-----	5	Not limited		Not limited		Somewhat limited Slope	0.04
L80D2:							
Lester, eroded-----	75	Not limited		Not limited		Very limited Slope	1.00
Ridgeton-----	10	Not limited		Not limited		Somewhat limited Slope	0.63
Storden, eroded-----	8	Not limited		Not limited		Very limited Slope	1.00
Terril-----	5	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80D2: Hamel-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L81A: Cordova-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Le Sueur-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Rolfe-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
L82A: Marna-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Barbert-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Guckeen-----	5	Not limited		Not limited		Not limited	
L83A: Webster-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
L84A: Glencoe-----	80	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L84A: Very poorly drained muck-----	10	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00 1.00
Canisteo-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L85A: Nicollet-----	85	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Clarion-----	10	Not limited		Not limited		Not limited	
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L86A: Madelia-----	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Okoboji-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Spicer-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Kingston-----	2	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
L87A: Kingston-----	85	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Truman-----	10	Not limited		Not limited		Not limited	
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L88A:							
Lura-----	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too clayey	1.00
		Too clayey	1.00	Too clayey	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
Brownton-----	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Organic soil-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
L89A:							
Guckeen-----	82	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Marna-----	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Clarion clay loam---	8	Not limited		Not limited		Not limited	
L90A:							
Le Sueur-----	75	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Depth to saturated zone	0.78
Cordova-----	13	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Reedslake-----	12	Not limited		Not limited		Not limited	
L91A:							
Mazaska-----	85	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Lerdal-----	10	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.22	Depth to saturated zone	0.22	Depth to saturated zone	0.60
Rolfe-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
L92A:							
Darfur-----	78	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Fieldon-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Litchfield-----	5	Somewhat limited Too sandy Depth to saturated zone	0.92 0.78	Somewhat limited Too sandy Depth to saturated zone	0.92 0.78	Somewhat limited Depth to saturated zone	0.90
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Dassel-----	2	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L93A: Muskego-----	82	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Carbonate content	1.00 1.00 1.00 1.00
Blue Earth-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Mineral soil, drained-----	5	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Belleville-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L94A: Lowlein-----	75	Not limited		Not limited		Not limited	
Linder-----	15	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Depth to saturated zone	0.90
Dickinson-----	8	Not limited		Not limited		Not limited	
Darfur-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L95E: Hawick-----	80	Somewhat limited Slope	0.32	Not limited		Very limited Slope Droughty Gravel content	1.00 1.00 0.01

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L95E:							
Estherville-----	10	Not limited		Not limited		Very limited Slope Droughty	1.00 0.59
Tomall-----	10	Not limited		Not limited		Not limited	
L96B:							
Estherville-----	55	Not limited		Not limited		Somewhat limited Droughty	0.12
Hawick-----	35	Not limited		Not limited		Very limited Droughty	1.00
Tomall-----	8	Not limited		Not limited		Not limited	
Biscay-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L97C:							
Hawick-----	60	Not limited		Not limited		Very limited Droughty Slope	1.00 0.04
Estherville-----	30	Not limited		Not limited		Somewhat limited Droughty Slope	0.12 0.04
Tomall-----	10	Not limited		Not limited		Not limited	
L98A:							
Crippin-----	50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Nicollet-----	40	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Canisteo-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	5	Not limited		Not limited		Not limited	
L99B:							
Clarion-----	62	Not limited		Not limited		Not limited	
Swanlake-----	25	Not limited		Not limited		Not limited	
Nicollet-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Webster-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L100B:							
Clarion-----	45	Not limited		Not limited		Not limited	
Estherville-----	35	Not limited		Not limited		Somewhat limited Droughty	0.12
Lowlein-----	5	Not limited		Not limited		Not limited	
Nicollet-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Swanlake-----	5	Not limited		Not limited		Not limited	
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L101C2:							
Omsrud, eroded-----	40	Not limited		Not limited		Somewhat limited Slope	0.04
Hawick-----	30	Not limited		Not limited		Very limited Droughty Slope	1.00 0.04
Storden, eroded-----	20	Not limited		Not limited		Somewhat limited Slope	0.04
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Terril-----	5	Not limited		Not limited		Not limited	
L101D2:							
Omsrud, eroded-----	40	Not limited		Not limited		Very limited Slope	1.00
Hawick-----	25	Not limited		Not limited		Very limited Slope Droughty	1.00 1.00
Storden, eroded-----	20	Not limited		Not limited		Very limited Slope	1.00
Ridgeton-----	6	Not limited		Not limited		Somewhat limited Slope	0.63
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Terril-----	4	Not limited		Not limited		Not limited	
L102C2:							
Omsrud, eroded-----	45	Not limited		Not limited		Somewhat limited Slope	0.04

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102C2:							
Storden, eroded-----	25	Not limited		Not limited		Somewhat limited Slope	0.04
Omsrud-----	15	Not limited		Not limited		Somewhat limited Slope	0.04
Terril-----	10	Not limited		Not limited		Not limited	
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L102D2:							
Omsrud, eroded-----	45	Not limited		Not limited		Very limited Slope	1.00
Storden, eroded-----	20	Not limited		Not limited		Very limited Slope	1.00
Omsrud-----	15	Not limited		Not limited		Very limited Slope	1.00
Ridgeton-----	8	Not limited		Not limited		Somewhat limited Slope	0.63
Delft-----	6	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Terril-----	6	Not limited		Not limited		Not limited	
L103A:							
Fieldon-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
L105C2:							
Lester, eroded-----	45	Not limited		Not limited		Somewhat limited Slope	0.04
Hawick-----	35	Not limited		Not limited		Very limited Droughty Slope	1.00 0.04
Terril-----	10	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105C2:							
Hamel-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Storden, eroded----	5	Not limited		Not limited		Somewhat limited Slope	0.04
L105D2:							
Lester, eroded-----	45	Not limited		Not limited		Very limited Slope	1.00
Hawick-----	35	Not limited		Not limited		Very limited Slope Droughty	1.00 1.00
Ridgeton-----	8	Not limited		Not limited		Somewhat limited Slope	0.63
Hamel-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Storden, eroded----	5	Not limited		Not limited		Very limited Slope	1.00
Terril-----	2	Not limited		Not limited		Not limited	
L106C2:							
Lester, eroded-----	62	Not limited		Not limited		Somewhat limited Slope	0.04
Storden, eroded----	20	Not limited		Not limited		Somewhat limited Slope	0.04
Terril-----	10	Not limited		Not limited		Not limited	
Hamel-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Reedslake-----	3	Not limited		Not limited		Not limited	
L106D2:							
Lester, eroded-----	62	Not limited		Not limited		Very limited Slope	1.00
Storden, eroded----	20	Not limited		Not limited		Very limited Slope	1.00
Ridgeton-----	10	Not limited		Not limited		Somewhat limited Slope	0.63
Terril-----	5	Not limited		Not limited		Not limited	
Hamel-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails	Value	Off-road motorcycle trails	Value	Golf fairways	Value
		Rating class and limiting features		Rating class and limiting features		Rating class and limiting features	
L107A:							
Canisteo-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Harps-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Crippin-----	2	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
L108A:							
Cordova-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Rolfe-----	30	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Le Sueur-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
L109A:							
Marna-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Barbert-----	30	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Guckeen-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
L110E:							
Lester-----	50	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Ridgeton-----	30	Somewhat limited Slope	0.08	Not limited		Very limited Slope	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110E: Cokato-----	10	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Belview-----	6	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Hamel-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Terril-----	2	Not limited		Not limited		Not limited	
L110F: Lester-----	55	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Ridgeton-----	30	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
Cokato-----	8	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope	1.00
Belview-----	4	Very limited Slope	1.00	Somewhat limited Slope	0.78	Very limited Slope	1.00
Terril-----	2	Not limited		Not limited		Not limited	
Hamel-----	1	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L111A: Nicollet-----	85	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Clarion-----	10	Not limited		Not limited		Not limited	
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L112A: Webster-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Nicollet-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L113B:							
Reedslake-----	75	Not limited		Not limited		Not limited	
Le Sueur-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Reedslake, eroded---	10	Not limited		Not limited		Not limited	
Cordova-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L114A:							
Hanlon, rarely flooded-----	85	Not limited		Not limited		Not limited	
Coland, occasionally flooded-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	5	Not limited		Not limited		Somewhat limited Droughty	0.01
L115A:							
Brownston-----	55	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Lura-----	35	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Ponding	1.00 1.00 1.00	Very limited Too clayey Ponding Depth to saturated zone	1.00 1.00 1.00
Marna-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L116A:							
Le Sueur-----	45	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Lerdal-----	40	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.60
Mazaska-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Kilkenny-----	5	Somewhat limited Depth to saturated zone	0.18	Somewhat limited Depth to saturated zone	0.18	Somewhat limited Depth to saturated zone	0.56

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L117C2:							
Omsrud, eroded-----	65	Not limited		Not limited		Somewhat limited Slope	0.04
Omsrud-----	15	Not limited		Not limited		Somewhat limited Slope	0.04
Terril-----	10	Not limited		Not limited		Not limited	
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Storden, eroded-----	5	Not limited		Not limited		Somewhat limited Slope	0.04
L118A:							
Rushriver, frequently flooded	85	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Houghton, frequently flooded-----	5	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Flooding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Klossner, frequently flooded-----	5	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Flooding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Medo, frequently flooded-----	5	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Content of organic matter Flooding	1.00 1.00 0.40	Very limited Flooding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
L119B:							
Angus-----	80	Not limited		Not limited		Not limited	
Angus, eroded-----	10	Not limited		Not limited		Not limited	
Cordova-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Le Sueur-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L120A:							
Good Thunder-----	80	Not limited		Not limited		Not limited	
Ocheyedan-----	10	Not limited		Not limited		Not limited	
Minnetonka-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L121B:							
Clarion-----	80	Not limited		Not limited		Not limited	
Guckeen-----	15	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Marna-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L122B:							
Reedslake-----	55	Not limited		Not limited		Not limited	
Estherville-----	25	Not limited		Not limited		Somewhat limited Droughty	0.12
Le Sueur-----	10	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.78
Cordova-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Lowlein-----	5	Not limited		Not limited		Not limited	
L123A:							
Belleville-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Granby-----	15	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89	Very limited Depth to saturated zone Ponding Too sandy	1.00 1.00 0.89	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 0.13
L124A:							
Glencoe mucky clay loam-----	85	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L124A: Glencoe clay loam---	5	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
L125A: Hanlon, rarely flooded-----	60	Not limited		Not limited		Not limited	
Coland, occasionally flooded-----	25	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	15	Not limited		Not limited		Somewhat limited Droughty	0.01
L126A: Coland, occasionally flooded-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, occasionally flooded-----	10	Not limited		Not limited		Somewhat limited Droughty	0.01
Havelock, occasionally flooded-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Spillville, occasionally flooded-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone Flooding	0.78 0.60
L127A: Coland, frequently flooded-----	80	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Minneopa, occasionally flooded-----	10	Not limited		Not limited		Not limited	

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Havelock, frequently flooded-----	5	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
Spillville, occasionally flooded-----	5	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone	0.50	Somewhat limited Depth to saturated zone Flooding	0.78 0.60
L128A: Mazaska-----	60	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Rolfe-----	30	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Lerdal-----	10	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.22	Somewhat limited Depth to saturated zone	0.60
L129B: Terril-----	90	Not limited		Not limited		Not limited	
Delft-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Hamel-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L130A: Okobojo mucky silty clay loam-----	75	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Okobojo silty clay loam-----	15	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Brownton-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Spicer-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 8b.--Recreation--Continued

Map symbol and component name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

[illegible]

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L36A:											
Hamel, overwash-----	50	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Hamel-----	43	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Glencoe-----	2	Good	Good	Good	Good	Fair	Good	Good	Good	Good	Good
L40B:											
Angus-----	45	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Kilkenny-----	40	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Lerdal-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Mazaska-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
L41C2:											
Lester, eroded-----	45	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Kilkenny, eroded-----	40	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Derrynane-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
L41D2:											
Lester, eroded-----	45	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Kilkenny, eroded-----	35	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Derrynane-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Ridgeton-----	5	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
L41E:											
Lester-----	45	Poor	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Kilkenny-----	40	Poor	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Derrynane-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Ridgeton-----	5	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L48A:											
Derrynane, overwash-----	50	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Derrynane-----	40	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Glencoe-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L49A:											
Klossner, surface drained-----	65	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Klossner, drained-----	20	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Mineral soil, drained---	15	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
L50A:											
Houghton, surface drained-----	40	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Muskego, surface drained	40	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Klossner, drained-----	10	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Mineral soil, drained---	10	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
L51C2:											
Gladek, eroded-----	80	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Barrington-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Lester, eroded-----	5	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Madelia-----	5	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
L56A:											
Muskego, frequently flooded-----	45	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Klossner, frequently flooded-----	45	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Suckercreek, frequently flooded-----	10	Poor	Poor	Good	Poor	Poor	Good	Good	Poor	Poor	Good
L57A:											
Medo, drained-----	80	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Mineral soil, drained---	15	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Houghton, drained-----	5	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
L63A:											
Klossner-----	85	Good	Poor	Poor	Poor	Poor	Good	Good	Fair	Poor	Good
Lura-----	10	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Brownnton-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L64A:											
Tadkee-----	50	Poor	Good	Good	Fair	Poor	Good	Good	Good	Poor	Good
Tadkee, depressiona-----	36	Poor	Good	Good	Poor	Poor	Good	Good	Poor	Poor	Good
Better drained soil-----	8	Fair	Good	Good	Fair	Good	Very poor	Very poor	Fair	Good	Very poor
Granby-----	4	Poor	Good	Good	Poor	Poor	Good	Good	Good	Poor	Good
Less sandy soil-----	2	Poor	Good	Good	Fair	Poor	Good	Good	Good	Poor	Good
L73A:											
Blue Earth-----	80	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Poor	Good
Belleville-----	10	Fair	Fair	Good	Poor	Poor	Fair	Fair	Fair	Poor	Fair
Canisteo-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
L74A:											
Estherville-----	87	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Hawick-----	10	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Biscay-----	3	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
L75B:											
Barrington-----	85	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Gladek-----	10	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Madelia-----	5	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
L76B:											
Dickinson-----	80	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Litchfield-----	13	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor
Darfur-----	5	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Clarion-----	2	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
L77A:											
Brownnton-----	75	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Marna-----	15	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Lura-----	10	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
L78A:											
Canisteo-----	65	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Crippin-----	10	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor
Glencoe-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L78A:											
Canisteo, depressional--	5	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Poor	Good
Harps-----	5	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
Webster-----	5	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L79B:											
Clarion-----	65	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Clarion, eroded-----	25	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Nicollet-----	8	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Webster-----	2	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L80C2:											
Lester, eroded-----	75	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	5	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
Reedslake-----	5	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Storden, eroded-----	5	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
L80D2:											
Lester, eroded-----	75	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Ridgeton-----	10	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Storden, eroded-----	8	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	2	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
L81A:											
Cordova-----	85	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Le Sueur-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Rolfe-----	5	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
L82A:											
Marna-----	85	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Barbert-----	10	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Fair
Guckeen-----	5	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L83A:											
Webster-----	65	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
Glencoe-----	15	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Canisteo-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Nicollet-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L84A:											
Glencoe-----	80	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Very poorly drained muck	10	Good	Poor	Poor	Poor	Poor	Good	Good	Fair	Poor	Good
Canisteo-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Harps-----	5	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
L85A:											
Nicollet-----	85	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Clarion-----	10	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Webster-----	5	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L86A:											
Madelia-----	90	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
Okoboji-----	5	Fair	Fair	Fair	Fair	Very poor	Good	Good	Fair	Fair	Good
Spicer-----	3	Good	Good	Fair	Fair	Poor	Good	Good	Good	Fair	Good
Kingston-----	2	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L87A:											
Kingston-----	85	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Truman-----	10	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor
Madelia-----	5	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
L88A:											
Lura-----	85	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Brownton-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Organic soil-----	5	Good	Poor	Poor	Poor	Poor	Good	Good	Fair	Poor	Good
L89A:											
Guckeen-----	82	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Marna-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Clarion clay loam-----	8	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L90A:											
Le Sueur-----	75	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Cordova-----	13	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Reedslake-----	12	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
L91A:											
Mazaska-----	85	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Lerdal-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Rolfe-----	5	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
L92A:											
Darfur-----	78	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Fieldon-----	10	Good	Good	Good	Good	Fair	Good	Good	Good	Good	Good
Litchfield-----	5	Fair	Good	Good	Good	Good	Fair	Poor	Good	Good	Poor
Webster-----	5	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
Dassel-----	2	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
L93A:											
Muskego-----	82	Good	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good
Blue Earth-----	10	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Poor	Good
Mineral soil, drained---	5	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Belleville-----	3	Fair	Fair	Good	Poor	Poor	Fair	Fair	Fair	Poor	Fair
L94A:											
Lowlein-----	75	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Linder-----	15	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Dickinson-----	8	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Darfur-----	2	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
L95E:											
Hawick-----	80	Very poor	Very poor	Fair	Poor	Poor	Very poor	Very poor	Very poor	Poor	Very poor
Estherville-----	10	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Tomall-----	10	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
L96B:											
Estherville-----	55	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Hawick-----	35	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L96B:											
Tomall-----	8	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Biscay-----	2	Good	Good	Good	Good	Fair	Good	Good	Good	Fair	Good
L97C:											
Hawick-----	60	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Estherville-----	30	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Tomall-----	10	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
L98A:											
Crippin-----	50	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor
Nicollet-----	40	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Canisteo-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Clarion-----	5	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
L99B:											
Clarion-----	62	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Swanlake-----	25	Good	Good	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
Nicollet-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Webster-----	3	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L100B:											
Clarion-----	45	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Estherville-----	35	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Lowlein-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Nicollet-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Swanlake-----	5	Good	Good	Good	Fair	Fair	Poor	Very poor	Good	Fair	Very poor
Webster-----	5	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L101C2:											
Omsrud, eroded-----	40	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Hawick-----	30	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Storden, eroded-----	20	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L101C2:											
Delft-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L101D2:											
Omsrud, eroded-----	40	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Hawick-----	25	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Storden, eroded-----	20	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Ridgeton-----	6	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Delft-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Terril-----	4	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L102C2:											
Omsrud, eroded-----	45	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Storden, eroded-----	25	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Omsrud-----	15	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Delft-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
L102D2:											
Omsrud, eroded-----	45	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Storden, eroded-----	20	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Omsrud-----	15	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Ridgeton-----	8	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Delft-----	6	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Terril-----	6	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L103A:											
Fieldon-----	50	Good	Good	Good	Good	Fair	Good	Good	Good	Good	Good
Canisteo-----	35	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Darfur-----	10	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Glencoe-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L105C2:											
Lester, eroded-----	45	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Hawick-----	35	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	5	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
Storden, eroded-----	5	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
L105D2:											
Lester, eroded-----	45	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Hawick-----	35	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Ridgeton-----	8	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Hamel-----	5	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
Storden, eroded-----	5	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Terril-----	2	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L106C2:											
Lester, eroded-----	62	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Storden, eroded-----	20	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	5	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
Reedslake-----	3	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
L106D2:											
Lester, eroded-----	62	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Storden, eroded-----	20	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Ridgeton-----	10	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Terril-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	3	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L107A:											
Canisteo-----	50	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Glencoe-----	35	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Harps-----	10	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
Canisteo, depressional--	3	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Poor	Good
Crippin-----	2	Good	Good	Good	Good	Fair	Fair	Poor	Good	Good	Poor
L108A:											
Cordova-----	65	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Rolfe-----	30	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
Le Sueur-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L109A:											
Marna-----	65	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Barbert-----	30	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Fair
Guckeen-----	5	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
L110E:											
Lester-----	50	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Ridgeton-----	30	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cokato-----	10	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Belview-----	6	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Hamel-----	2	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
Terril-----	2	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L110F:											
Lester-----	55	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Ridgeton-----	30	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cokato-----	8	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Belview-----	4	Poor	Fair	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
Terril-----	2	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Hamel-----	1	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L111A:											
Nicollet-----	85	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Clarion-----	10	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Webster-----	5	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
L112A:											
Webster-----	85	Good	Good	Good	Fair	Poor	Good	Good	Good	Fair	Good
Glencoe-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Nicollet-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L113B:											
Reedslake-----	75	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Le Sueur-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Reedslake, eroded-----	10	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cordova-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
L114A:											
Hanlon, rarely flooded--	85	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Coland, occasionally flooded-----	10	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Minneopa, rarely flooded	5	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor
L115A:											
Brownton-----	55	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Lura-----	35	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Marna-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
L116A:											
Le Sueur-----	45	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Lerdal-----	40	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Mazaska-----	10	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Kilkenny-----	5	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
L117C2:											
Omsrud, eroded-----	65	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Omsrud-----	15	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Terril-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Delft-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L117C2: Storden, eroded-----	5	Fair	Good	Good	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor
L118A: Rushriver, frequently flooded-----	85	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Houghton, frequently flooded-----	5	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Klossner, frequently flooded-----	5	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Medo, frequently flooded	5	Fair	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good
L119B: Angus-----	80	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Angus, eroded-----	10	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Cordova-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Le Sueur-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L120A: Good Thunder-----	80	Good	Good	Good	Good	Good	Poor	Poor	Fair	Good	Poor
Ocheyedan-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Minnetonka-----	10	Good	Good	Good	Good	Good	Good	Good	Good	Fair	Good
L121B: Clarion-----	80	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Guckeen-----	15	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
Marna-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
L122B: Reedslake-----	55	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Estherville-----	25	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Le Sueur-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Cordova-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Lowlein-----	5	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L123A: Belleville-----	85	Fair	Fair	Good	Poor	Poor	Fair	Fair	Fair	Poor	Fair
Granby-----	15	Poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good

Table 9.--Wildlife Habitat--Continued

Map symbol and component name	Pct. of map unit	Potential for habitat elements							Potential as habitat for--		
		Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
L124A:											
Glencoe mucky clay loam	85	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Canisteo-----	10	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
Glencoe clay loam-----	5	Good	Good	Fair	Fair	Fair	Good	Good	Good	Fair	Good
L125A:											
Hanlon, rarely flooded--	60	Good	Good	Good	Good	Good	Poor	Fair	Good	Good	Poor
Coland, occasionally flooded-----	25	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Minneopa, rarely flooded	15	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor
L126A:											
Coland, occasionally flooded-----	80	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Minneopa, occasionally flooded-----	10	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor
Havelock, occasionally flooded-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Spillville, occasionally flooded-----	5	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
L127A:											
Coland, frequently flooded-----	80	Poor	Fair	Fair	Poor	Poor	Good	Good	Poor	Poor	Good
Minneopa, occasionally flooded-----	10	Fair	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor
Havelock, frequently flooded-----	5	Poor	Fair	Fair	Poor	Poor	Good	Good	Poor	Fair	Good
Spillville, occasionally flooded-----	5	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
L128A:											
Mazaska-----	60	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Rolfe-----	30	Fair	Fair	Fair	Fair	Poor	Good	Good	Fair	Fair	Good
Lerdal-----	10	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
L129B:											
Terril-----	90	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Delft-----	5	Good	Good	Good	Fair	Fair	Good	Good	Good	Fair	Good
Hamel-----	5	Good	Good	Fair	Good	Fair	Good	Good	Good	Fair	Good
L130A:											
Okoboji mucky silty clay loam-----	75	Fair	Fair	Fair	Fair	Very poor	Good	Good	Fair	Fair	Good
Okoboji silty clay loam	15	Fair	Fair	Fair	Fair	Very poor	Good	Good	Fair	Fair	Good

Table 9.--Wildlife Habitat--Continued

[illegible]

Table 10a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash----	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Delft-----	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Glencoe-----	5	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Terril-----	5	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
L13A:							
Klossner, drained---	80	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Content of organic matter	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Shrink-swell	0.50	Ponding	1.00
Mineral soil, drained-----	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Houghton, drained---	5	Very limited		Very limited		Very limited	
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Houghton, drained---	80	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding Shrink-swell	 1.00 1.00 0.50
L15A: Klossner, ponded----	30	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Ponding Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Shrink-swell Depth to saturated zone	 1.00 1.00 1.00
Glencoe, ponded-----	30	Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	 1.00 1.00 0.50
Houghton, ponded----	10	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00
L16A: Muskego, ponded-----	30	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L16A:							
Blue Earth, ponded---	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
Houghton, ponded----	30	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Klossner, ponded----	10	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Content of organic matter	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00
		Depth to saturated zone	1.00	Shrink-swell	0.50	Depth to saturated zone	1.00
L26B:							
Shorewood-----	90	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
Good Thunder-----	5	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Minnetonka-----	5	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00	Shrink-swell	0.50	Depth to saturated zone	1.00
L36A:							
Hamel, overwash----	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.98	Depth to saturated zone	1.00	Depth to saturated zone	0.98
				Shrink-swell	0.50		
Hamel-----	43	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
Terril-----	5	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.78		
Glencoe-----	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Shrink-swell	0.50			Shrink-swell	0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L40B:							
Angus-----	45	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Kilkenny-----	40	Somewhat limited Depth to saturated zone Shrink-swell	0.88 0.50	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone Shrink-swell	0.88 0.50
Lerdal-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 0.90	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.90
Mazaska-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
L41C2:							
Lester, eroded-----	45	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
Kilkenny, eroded----	40	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Depth to saturated zone Shrink-swell Slope	1.00 0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Derrynane-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
L41D2:							
Lester, eroded-----	45	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Kilkenny, eroded----	35	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Derrynane-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Shrink-swell Depth to saturated zone	1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41D2: Ridgeton-----	5	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
L41E: Lester-----	45	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
Kilkenny-----	40	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to saturated zone	1.00 1.00	Very limited Slope Shrink-swell	1.00 0.50
Terril-----	5	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Derrynane-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Ridgeton-----	5	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Slope	1.00
L48A: Derrynane, overwash	50	Very limited Shrink-swell Depth to saturated zone	1.00 0.98	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.98
Derrynane-----	40	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Glencoe-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Terril-----	5	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
L49A: Klossner, surface drained-----	65	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L49A: Klossner, drained---	20	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding	1.00 1.00 1.00 0.50	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50
L50A: Houghton, surface drained-----	40	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Subsidence Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Shrink-swell	1.00 1.00 1.00 0.50
L51C2: Gladek, eroded-----	80	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Slope	0.04	Very limited Slope Shrink-swell	1.00 0.50
Barrington-----	10	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.01

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L51C2: Lester, eroded-----	5	Somewhat limited Shrink-swell Slope	 0.50 0.04	Somewhat limited Shrink-swell Slope	 0.50 0.04	Very limited Slope Shrink-swell	 1.00 0.50
Madelia-----	5	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone Shrink-swell	 1.00 0.50
L56A: Muskego, frequently flooded-----	45	Very limited Ponding Subsidence Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00 1.00
Klossner, frequently flooded-----	45	Very limited Ponding Subsidence Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 1.00	Very limited Flooding Depth to saturated zone	 1.00 1.00
L57A: Medo, drained-----	80	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, drained---	5	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Content of organic matter Depth to saturated zone	 1.00 1.00 1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L63A:							
Klossner-----	85	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of organic matter	1.00	Shrink-swell	0.50	Content of organic matter	1.00
Lura-----	10	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
Brownton-----	5	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00			Depth to saturated zone	1.00
L64A:							
Tadkee-----	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Tadkee, depressional	36	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Better drained soil	8	Somewhat limited		Very limited		Somewhat limited	
		Depth to saturated zone	0.01	Depth to saturated zone	1.00	Depth to saturated zone	0.01
Granby-----	4	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Less sandy soil----	2	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
L73A:							
Blue Earth-----	80	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Content of organic matter	1.00			Content of organic matter	1.00
Belleville-----	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Canistee-----	10	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L74A:							
Estherville-----	87	Not limited		Not limited		Not limited	
Hawick-----	10	Not limited		Not limited		Not limited	
Biscay-----	3	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
L75B:							
Barrington-----	85	Somewhat limited		Very limited		Somewhat limited	
		Shrink-swell	0.50	Depth to saturated zone	1.00	Shrink-swell	0.50
		Depth to saturated zone	0.01			Depth to saturated zone	0.01
Gladek-----	10	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Slope	0.04	Slope	1.00
		Slope	0.04			Shrink-swell	0.50
Madelia-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	0.50			Shrink-swell	0.50
L76B:							
Dickinson-----	80	Not limited		Not limited		Not limited	
Litchfield-----	13	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Darfur-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Clarion-----	2	Not limited		Somewhat limited		Not limited	
				Depth to saturated zone	0.78		
L77A:							
Brownston-----	75	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00			Depth to saturated zone	1.00
Marna-----	15	Very limited		Very limited		Very limited	
		Shrink-swell	1.00	Depth to saturated zone	1.00	Shrink-swell	1.00
		Depth to saturated zone	1.00			Depth to saturated zone	1.00
Lura-----	10	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Shrink-swell	1.00	Shrink-swell	1.00	Shrink-swell	1.00
L78A:							
Canisteo-----	65	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A: Crippin-----	10	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
Glencoe-----	10	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Canisteo, depressional-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L79B: Clarion-----	65	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Clarion, eroded-----	25	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Nicollet-----	8	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Webster-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L80C2: Lester, eroded-----	75	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Somewhat limited Slope	0.12
Hamel-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80C2: Reedslake-----	5	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Storden, eroded----	5	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
L80D2: Lester, eroded-----	75	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Storden, eroded----	8	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Terril-----	5	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.12 0.01
Hamel-----	2	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L81A: Cordova-----	85	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Le Sueur-----	10	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Rolfe-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
L82A: Marna-----	85	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Barbert-----	10	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L82A: Guckeen-----	5	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.01
L83A: Webster-----	65	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	15	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Canistee-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	10	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
L84A: Glencoe-----	80	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Very poorly drained muck-----	10	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
Canistee-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L85A: Nicollet-----	85	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Clarion-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L86A: Madelia-----	90	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Okoboji-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Spicer-----	3	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Kingston-----	2	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
L87A: Kingston-----	85	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
Truman-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Madelia-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L88A: Lura-----	85	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Brownton-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Organic soil-----	5	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50
L89A: Guckeen-----	82	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L89A: Marna-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Clarion clay loam---	8	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
L90A: Le Sueur-----	75	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Cordova-----	13	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Reedslake-----	12	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
L91A: Mazaska-----	85	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Lerdal-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 0.90	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.90
Rolfe-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
L92A: Darfur-----	78	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Fieldon-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Litchfield-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Dassel-----	2	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L93A: Muskego-----	82	Very limited Ponding Subsidence Depth to saturated zone Content of organic matter Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Subsidence Depth to saturated zone Content of organic matter Shrink-swell	1.00 1.00 1.00 1.00 0.50
Blue Earth-----	10	Very limited Ponding Depth to saturated zone Content of organic matter	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter	1.00 1.00 1.00
Mineral soil, drained-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Belleville-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L94A: Lowlein-----	75	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.01
Linder-----	15	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Dickinson-----	8	Not limited		Not limited		Not limited	
Darfur-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L95E: Hawick-----	80	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Estherville-----	10	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Tomall-----	10	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L96B:							
Estherville-----	55	Not limited		Not limited		Not limited	
Hawick-----	35	Not limited		Not limited		Not limited	
Tomall-----	8	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
Biscay-----	2	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L97C:							
Hawick-----	60	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Estherville-----	30	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Tomall-----	10	Not limited		Somewhat limited Depth to saturated zone	0.61	Not limited	
L98A:							
Crippin-----	50	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
Nicollet-----	40	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Canistee-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	5	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
L99B:							
Clarion-----	62	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Swanlake-----	25	Not limited		Somewhat limited Depth to saturated zone	0.78	Somewhat limited Slope	0.12
Nicollet-----	10	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Webster-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L100B: Clarion-----	45	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Estherville-----	35	Not limited		Not limited		Not limited	
Lowlein-----	5	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.01
Nicollet-----	5	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Swanlake-----	5	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Webster-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L101C2: Omsrud, eroded-----	40	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Hawick-----	30	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Storden, eroded-----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Delft-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Terril-----	5	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
L101D2: Omsrud, eroded-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hawick-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	6	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Delft-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101D2: Terril-----	4	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.12 0.01
L102C2: Omsrud, eroded----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Storden, eroded----	25	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Delft-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L102D2: Omsrud, eroded----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Storden, eroded----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Omsrud-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Delft-----	6	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Terril-----	6	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.12 0.01
L103A: Fieldon-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo-----	35	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L103A: Glencoe-----	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
L105C2: Lester, eroded-----	45	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
Hawick-----	35	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Hamel-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Storden, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
L105D2: Lester, eroded-----	45	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Hawick-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Hamel-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Storden, eroded-----	5	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Terril-----	2	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.12 0.01
L106C2: Lester, eroded-----	62	Somewhat limited Shrink-swell Slope	0.50 0.04	Somewhat limited Shrink-swell Slope	0.50 0.04	Very limited Slope Shrink-swell	1.00 0.50
Storden, eroded-----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106C2: Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Hamel-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Reedslake-----	3	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
L106D2: Lester, eroded-----	62	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Shrink-swell	1.00 0.50
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Slope	1.00
Terril-----	5	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Slope Depth to saturated zone	0.12 0.01
Hamel-----	3	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L107A: Canisteo-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Harps-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Crippin-----	2	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L108A: Cordova-----	65	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Rolfe-----	30	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Le Sueur-----	5	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
L109A: Marna-----	65	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Barbert-----	30	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Guckeen-----	5	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
L110E: Lester-----	50	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cokato-----	10	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
Belview-----	6	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Hamel-----	2	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Terril-----	2	Not limited		Somewhat limited Depth to saturated zone	0.78	Somewhat limited Slope	0.12
L110F: Lester-----	55	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110F: Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cokato-----	8	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope	1.00	Very limited Slope Shrink-swell	1.00 0.50
Belview-----	4	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Terril-----	2	Not limited		Somewhat limited Depth to saturated zone	0.78	Somewhat limited Slope	0.12
Hamel-----	1	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L111A: Nicollet-----	85	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Clarion-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Webster-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L112A: Webster-----	85	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Glencoe-----	10	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Nicollet-----	5	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
L113B: Reedslake-----	75	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Le Sueur-----	10	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L113B: Reedslake, eroded---	10	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell Slope	0.50 0.12
Cordova-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L114A: Hanlon, rarely flooded-----	85	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01
Coland, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Minneopa, rarely flooded-----	5	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01
L115A: Brownton-----	55	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Lura-----	35	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Marna-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
L116A: Le Sueur-----	45	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Lerdal-----	40	Very limited Shrink-swell Depth to saturated zone	1.00 0.90	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.90

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L116A: Mazaska-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Kilkenny-----	5	Somewhat limited Depth to saturated zone Shrink-swell	0.88 0.50	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone Shrink-swell	0.88 0.50
L117C2: Omsrud, eroded-----	65	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Terril-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Somewhat limited Slope	0.50
Delft-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Storden, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
L118A: Rushriver, frequently flooded	85	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
Houghton, frequently flooded-----	5	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00
Klossner, frequently flooded-----	5	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Subsidence Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00 0.50	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter Shrink-swell	1.00 1.00 1.00 1.00 0.50

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L118A: Medo, frequently flooded-----	5	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00
L119B: Angus-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Angus, eroded-----	10	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone Shrink-swell	0.78 0.50	Somewhat limited Shrink-swell	0.50
Cordova-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Le Sueur-----	5	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
L120A: Good Thunder-----	80	Very limited Shrink-swell Depth to saturated zone	1.00 0.01	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.01
Ocheyedan-----	10	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Minnetonka-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
L121B: Clarion-----	80	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Guckeen-----	15	Somewhat limited Depth to saturated zone	0.99	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	0.99
Marna-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L122B: Reedslake-----	55	Somewhat limited Shrink-swell	0.50	Somewhat limited Depth to saturated zone	0.78	Somewhat limited Shrink-swell	0.50
Estherville-----	25	Not limited		Not limited		Not limited	
Le Sueur-----	10	Somewhat limited Depth to saturated zone Shrink-swell	0.99 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	0.99 0.50
Cordova-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Lowlein-----	5	Somewhat limited Depth to saturated zone	0.01	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.01
L123A: Belleville-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Granby-----	15	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
L124A: Glencoe mucky clay loam-----	85	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Canisteo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe clay loam---	5	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
L125A: Hanlon, rarely flooded-----	60	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L125A: Coland, occasionally flooded-----	25	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Minneopa, rarely flooded-----	15	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01
L126A: Coland, occasionally flooded-----	80	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Minneopa, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01
Havelock, occasionally flooded-----	5	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 1.00
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50
L127A: Coland, frequently flooded-----	80	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50
Minneopa, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone	1.00 0.01	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.01

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Havelock, frequently flooded-----	5	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Flooding Shrink-swell Depth to saturated zone	1.00 1.00 1.00
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Shrink-swell	1.00 0.99 0.50
L128A: Mazaska-----	60	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Rolfe-----	30	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Lerdal-----	10	Very limited Shrink-swell Depth to saturated zone	1.00 0.90	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 0.90
L129B: Terril-----	90	Not limited		Somewhat limited Depth to saturated zone	0.78	Not limited	
Delft-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
Hamel-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
L130A: Okoboji mucky silty clay loam-----	75	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
Okoboji silty clay loam-----	15	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00

Table 10a.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L130A:							
Brownton-----	5	Very limited Shrink-swell Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Shrink-swell Depth to saturated zone	1.00 1.00
Spicer-----	5	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50	Very limited Depth to saturated zone Shrink-swell	1.00 0.50
M-W:							
Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B:							
Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W:							
Water-----	100	Not rated		Not rated		Not rated	

Table 10b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash-----	50	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.75 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.75
Delft-----	40	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Terril-----	5	Somewhat limited Frost action	0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Not limited	
L13A:							
Klossner, drained---	80	Very limited Subsidence Frost action Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Frost action Depth to saturated zone Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
Houghton, drained---	5	Very limited Subsidence Frost action Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Houghton, drained---	80	Very limited Subsidence Frost action Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding Cutbanks cave	 1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Subsidence Frost action Depth to saturated zone Ponding Ponding	 1.00 1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	 1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Frost action Depth to saturated zone Low strength Ponding Shrink-swell	 1.00 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	 1.00 1.00
L15A: Klossner, ponded----	30	Very limited Ponding Subsidence Frost action Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter Cutbanks cave	 1.00 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Ponding Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Glencoe, ponded-----	30	Very limited Ponding Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, ponded----	10	Very limited Ponding Subsidence Frost action Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L16A: Muskego, ponded-----	30	Very limited Ponding Subsidence Frost action Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Carbonate content Depth to saturated zone	 1.00 1.00 1.00 1.00
Blue Earth, ponded--	30	Very limited Ponding Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Content of organic matter Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, ponded----	30	Very limited Ponding Subsidence Frost action Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
Klossner, ponded----	10	Very limited Ponding Subsidence Frost action Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
L26B: Shorewood-----	90	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 0.75	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.15 0.10	Somewhat limited Depth to saturated zone	 0.75
Good Thunder-----	5	Very limited Frost action Shrink-swell	 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.15 0.10	Not limited	
Minnetonka-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.12 0.10	Very limited Depth to saturated zone	 1.00
L36A: Hamel, overwash-----	50	Very limited Frost action Depth to saturated zone	 1.00 0.75	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.75

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets	Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
L36A: Hamel-----	43	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone
Terril-----	5	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited
Glencoe-----	2	Very limited Frost action Depth to saturated zone Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone Ponding
L40B: Angus-----	45	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited
Kilkenny-----	40	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.56 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone
Lerdal-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 0.60	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.12 0.10	Somewhat limited Depth to saturated zone
Mazaska-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	1.00 0.10 0.03	Very limited Depth to saturated zone
L41C2: Lester, eroded-----	45	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope
Kilkenny, eroded----	40	Very limited Frost action Shrink-swell Slope	1.00 0.50 0.04	Very limited Depth to saturated zone Cutbanks cave Slope	1.00 0.10 0.04	Somewhat limited Slope
Terril-----	10	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41C2: Derrynane-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L41D2: Lester, eroded-----	45	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Kilkenny, eroded----	35	Very limited Frost action Slope Shrink-swell	 1.00 1.00 0.50	Very limited Slope Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Slope	 1.00
Terril-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Derrynane-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Ridgeton-----	5	Somewhat limited Frost action Slope	 0.50 0.16	Somewhat limited Slope Cutbanks cave	 0.16 0.10	Somewhat limited Slope	 0.16
L41E: Lester-----	45	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Kilkenny-----	40	Very limited Slope Frost action Shrink-swell	 1.00 1.00 0.50	Very limited Slope Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Slope	 1.00
Terril-----	5	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Derrynane-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Ridgeton-----	5	Somewhat limited Slope Frost action	 0.96 0.50	Somewhat limited Slope Cutbanks cave	 0.96 0.10	Somewhat limited Slope	 0.96

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L48A: Derrynane, overwash	50	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 0.75	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.75
Derrynane-----	40	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Glencoe-----	5	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Terril-----	5	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
L49A: Klossner, surface drained-----	65	Very limited Subsidence Frost action Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00
Klossner, drained---	20	Very limited Subsidence Frost action Depth to saturated zone Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	 1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Frost action Depth to saturated zone Low strength Ponding Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Cutbanks cave	 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L50A: Houghton, surface drained-----	40	Very limited Subsidence Frost action Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Subsidence Frost action Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Carbonate content Depth to saturated zone Ponding	1.00 1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Subsidence Frost action Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Mineral soil, drained-----	10	Very limited Frost action Depth to saturated zone Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00
L51C2: Gladek, eroded-----	80	Very limited Frost action Shrink-swell Slope	1.00 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Barrington-----	10	Very limited Frost action Shrink-swell	1.00 0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	
Lester, eroded-----	5	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Madelia-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L56A: Muskego, frequently flooded-----	45	Very limited Ponding Subsidence Frost action Flooding Depth to saturated zone	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 1.00 1.00 0.80 0.10	Very limited Ponding Flooding Content of organic matter Carbonate content Depth to saturated zone	1.00 1.00 1.00 1.00 1.00 1.00
Klossner, frequently flooded-----	45	Very limited Ponding Subsidence Frost action Flooding Depth to saturated zone	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter Flooding Cutbanks cave	1.00 1.00 1.00 1.00 0.80 0.10	Very limited Ponding Flooding Content of organic matter Depth to saturated zone	1.00 1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Frost action Flooding Depth to saturated zone	1.00 1.00 1.00	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	1.00 1.00
L57A: Medo, drained-----	80	Very limited Ponding Subsidence Frost action Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Cutbanks cave Depth to saturated zone Content of organic matter	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Mineral soil, drained-----	15	Very limited Ponding Frost action Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Cutbanks cave Depth to saturated zone	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
Houghton, drained---	5	Very limited Ponding Subsidence Frost action Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Ponding Content of organic matter Depth to saturated zone Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
L63A: Klossner-----	85	Very limited Ponding Depth to saturated zone Subsidence Frost action	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L63A:							
Lura-----	10	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Too clayey	1.00
		Depth to	1.00	Depth to	1.00	Ponding	1.00
		saturated zone		saturated zone		Depth to	1.00
		Frost action	1.00	Too clayey	0.72	saturated zone	
		Shrink-swell	1.00	Cutbanks cave	0.10		
Brownnton-----	5	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to	1.00	Depth to	1.00
		Shrink-swell	1.00	saturated zone		saturated zone	
		Depth to	1.00	Too clayey	0.28		
		saturated zone		Cutbanks cave	0.10		
L64A:							
Tadkee-----	50	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to	1.00	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Cutbanks cave	1.00		
Tadkee, depressional	36	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to	1.00	Depth to	1.00	Depth to	1.00
		saturated zone		saturated zone		saturated zone	
		Frost action	1.00	Cutbanks cave	1.00		
Better drained soil	8	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
				Depth to	1.00		
				saturated zone			
Granby-----	4	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to	1.00	Depth to	1.00	Depth to	1.00
		saturated zone		saturated zone		saturated zone	
		Frost action	1.00	Cutbanks cave	1.00	Droughty	0.13
Less sandy soil-----	2	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to	1.00	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Cutbanks cave	0.10		
L73A:							
Blue Earth-----	80	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to	1.00	Depth to	1.00	Depth to	1.00
		saturated zone		saturated zone		saturated zone	
		Frost action	1.00	Content of	1.00		
				organic matter			
				Cutbanks cave	0.10		
Belleville-----	10	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to	1.00	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Cutbanks cave	1.00		
Canisteo-----	10	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to	1.00	Depth to	1.00
		Depth to	1.00	saturated zone		saturated zone	
		saturated zone		Cutbanks cave	0.10		

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L74A:							
Estherville-----	87	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.12
Hawick-----	10	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty	1.00
Biscay-----	3	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00 1.00	Very limited Depth to saturated zone	1.00
L75B:							
Barrington-----	85	Very limited Frost action Shrink-swell	1.00 0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	
Gladek-----	10	Very limited Frost action Shrink-swell Slope	1.00 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Madelia-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Depth to saturated zone	1.00
L76B:							
Dickinson-----	80	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
Litchfield-----	13	Somewhat limited Depth to saturated zone Frost action	0.90 0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone	0.90
Darfur-----	5	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Clarion-----	2	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L77A:							
Brownnton-----	75	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.28 0.10	Very limited Depth to saturated zone	1.00
Marna-----	15	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.28 0.10	Very limited Depth to saturated zone	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L77A: Lura-----	10	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.72 0.10	Very limited Too clayey Ponding Depth to saturated zone	 1.00 1.00 1.00
L78A: Canisteo-----	65	Very limited Frost action Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Crippin-----	10	Very limited Frost action Depth to saturated zone	 1.00 0.78	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Glencoe-----	10	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Canisteo, depressional-----	5	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Harps-----	5	Very limited Frost action Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Webster-----	5	Very limited Frost action Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L79B: Clarion-----	65	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Clarion, eroded-----	25	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Nicollet-----	8	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L79B: Webster-----	2	Very limited Frost action Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L80C2: Lester, eroded-----	75	Somewhat limited Shrink-swell Frost action Slope	 0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Terril-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Hamel-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Reedslake-----	5	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Storden, eroded-----	5	Somewhat limited Shrink-swell Frost action Slope	 0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
L80D2: Lester, eroded-----	75	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Ridgeton-----	10	Somewhat limited Slope Frost action	 0.63 0.50	Somewhat limited Slope Cutbanks cave	 0.63 0.10	Somewhat limited Slope	 0.63
Storden, eroded-----	8	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Terril-----	5	Somewhat limited Frost action	 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Not limited	
Hamel-----	2	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L81A: Cordova-----	85	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Le Sueur-----	10	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Rolfe-----	5	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	 1.00 1.00 0.10 0.02	Very limited Ponding Depth to saturated zone	 1.00 1.00
L82A: Marna-----	85	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
Barbert-----	10	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.72 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Guckeen-----	5	Very limited Frost action	 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	 1.00 0.10 0.03	Not limited	
L83A: Webster-----	65	Very limited Frost action Depth to saturated zone	 1.00 1.00 	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Glencoe-----	15	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Canisteo-----	10	Very limited Frost action Depth to saturated zone	 1.00 1.00 	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L83A: Nicollet-----	10	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
L84A: Glencoe-----	80	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Very poorly drained muck-----	10	Very limited Ponding Depth to saturated zone Subsidence Frost action Low strength	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	1.00 1.00 1.00
Canisteo-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
L85A: Nicollet-----	85	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Clarion-----	10	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Webster-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
L86A: Madelia-----	90	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L86A: Okoboji-----	5	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	 1.00 1.00 0.10 0.02	Very limited Ponding Depth to saturated zone	 1.00 1.00
Spicer-----	3	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Kingston-----	2	Very limited Frost action Depth to saturated zone	 1.00 0.78 	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
L87A: Kingston-----	85	Very limited Frost action Depth to saturated zone	 1.00 0.78 	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Truman-----	10	Very limited Frost action	 1.00 	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Madelia-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L88A: Lura-----	85	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.72 0.10	Very limited Too clayey Ponding Depth to saturated zone	 1.00 1.00 1.00
Brownton-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
Organic soil-----	5	Very limited Ponding Depth to saturated zone Subsidence Frost action Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L89A: Guckeen-----	82	Very limited Frost action Depth to saturated zone	1.00 0.78	Very limited Depth to saturated zone Cutbanks cave Too clayey	1.00 0.10 0.03	Somewhat limited Depth to saturated zone	0.78
Marna-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.28 0.10	Very limited Depth to saturated zone	1.00
Clarion clay loam---	8	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L90A: Le Sueur-----	75	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Cordova-----	13	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Reedslake-----	12	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L91A: Mazaska-----	85	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	1.00 0.10 0.03	Very limited Depth to saturated zone	1.00
Lerdal-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 0.60	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.12 0.10	Somewhat limited Depth to saturated zone	0.60
Rolfe-----	5	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	1.00 1.00 0.10 0.02	Very limited Ponding Depth to saturated zone	1.00 1.00
L92A: Darfur-----	78	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Fieldon-----	10	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Litchfield-----	5	Somewhat limited Depth to saturated zone Frost action	0.90 0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone	0.90
Webster-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Dassel-----	2	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L93A: Muskego-----	82	Very limited Ponding Depth to saturated zone Subsidence Frost action Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Content of organic matter Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Ponding Content of organic matter Depth to saturated zone Carbonate content	1.00 1.00 1.00 1.00
Blue Earth-----	10	Very limited Ponding Depth to saturated zone Frost action	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Content of organic matter Cutbanks cave	1.00 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Mineral soil, drained-----	5	Very limited Ponding Frost action Depth to saturated zone Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Belleville-----	3	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
L94A: Lowlein-----	75	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L94A:							
Linder-----	15	Very limited Frost action Depth to saturated zone	1.00 0.90	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone	0.90
Dickinson-----	8	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	
Darfur-----	2	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
L95E:							
Hawick-----	80	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty Gravel content	1.00 1.00 0.01
Estherville-----	10	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.59
Tomall-----	10	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.61	Not limited	
L96B:							
Estherville-----	55	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.12
Hawick-----	35	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty	1.00
Tomall-----	8	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.61	Not limited	
Biscay-----	2	Very limited Depth to saturated zone Frost action Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
L97C:							
Hawick-----	60	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Slope	1.00 0.04
Estherville-----	30	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.12 0.04
Tomall-----	10	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.61	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L98A: Crippin-----	50	Very limited Frost action Depth to saturated zone	1.00 0.78	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Nicollet-----	40	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Canisteo-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Clarion-----	5	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L99B: Clarion-----	62	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Swanlake-----	25	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Nicollet-----	10	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Webster-----	3	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
L100B: Clarion-----	45	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Estherville-----	35	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.12
Lowlein-----	5	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L100B: Nicollet-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Swanlake-----	5	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Webster-----	5	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
L101C2: Omsrud, eroded-----	40	Somewhat limited Frost action Slope	0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Hawick-----	30	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Slope	1.00 0.04
Storden, eroded-----	20	Somewhat limited Frost action Slope	0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Delft-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Terril-----	5	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L101D2: Omsrud, eroded-----	40	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Hawick-----	25	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 1.00
Storden, eroded-----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Ridgeton-----	6	Somewhat limited Slope Frost action	0.63 0.50	Somewhat limited Slope Cutbanks cave	0.63 0.10	Somewhat limited Slope	0.63

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101D2: Delft-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Terril-----	4	Somewhat limited Frost action	 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Not limited	
L102C2: Omsrud, eroded-----	45	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Storden, eroded-----	25	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Omsrud-----	15	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Terril-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Delft-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L102D2: Omsrud, eroded-----	45	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Storden, eroded-----	20	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Omsrud-----	15	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Ridgeton-----	8	Somewhat limited Slope Frost action	 0.63 0.50	Somewhat limited Slope Cutbanks cave	 0.63 0.10	Somewhat limited Slope	 0.63
Delft-----	6	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102D2: Terril-----	6	Somewhat limited Frost action	0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Not limited	
L103A: Fieldon-----	50	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Canisteo-----	35	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
L105C2: Lester, eroded-----	45	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Hawick-----	35	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Slope	1.00 0.04
Terril-----	10	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Hamel-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Storden, eroded-----	5	Somewhat limited Frost action Slope	0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
L105D2: Lester, eroded-----	45	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105D2: Hawick-----	35	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00	Very limited Slope Droughty	1.00
Ridgeton-----	8	Somewhat limited Slope Frost action	0.63 0.50	Somewhat limited Slope Cutbanks cave	0.63 0.10	Somewhat limited Slope	0.63
Hamel-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Storden, eroded----	5	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Terril-----	2	Somewhat limited Frost action	0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Not limited	
L106C2: Lester, eroded-----	62	Somewhat limited Shrink-swell Frost action Slope	0.50 0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Storden, eroded----	20	Somewhat limited Frost action Slope	0.50 0.04	Somewhat limited Cutbanks cave Slope	0.10 0.04	Somewhat limited Slope	0.04
Terril-----	10	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Hamel-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Reedslake-----	3	Somewhat limited Shrink-swell Frost action	0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
L106D2: Lester, eroded-----	62	Very limited Slope Shrink-swell Frost action	1.00 0.50 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Storden, eroded----	20	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106D2: Ridgeton-----	10	Somewhat limited Slope Frost action	0.63 0.50	Somewhat limited Slope Cutbanks cave	0.63 0.10	Somewhat limited Slope	0.63
Terril-----	5	Somewhat limited Frost action	0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Not limited	
Hamel-----	3	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
L107A: Canisteo-----	50	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Harps-----	10	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Crippin-----	2	Very limited Frost action Depth to saturated zone	1.00 0.78	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
L108A: Cordova-----	65	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Rolfe-----	30	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	1.00 1.00 0.10 0.02	Very limited Ponding Depth to saturated zone	1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L108A: Le Sueur-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
L109A: Marna-----	65	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
Barbert-----	30	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.72 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Guckeen-----	5	Very limited Frost action Depth to saturated zone	 1.00 0.78	Very limited Depth to saturated zone Cutbanks cave Too clayey	 1.00 0.10 0.03	Somewhat limited Depth to saturated zone	 0.78
L110E: Lester-----	50	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Ridgeton-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Cokato-----	10	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Belview-----	6	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Hamel-----	2	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Terril-----	2	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110F: Lester-----	55	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Ridgeton-----	30	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Cokato-----	8	Very limited Slope Shrink-swell Frost action	 1.00 0.50 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Belview-----	4	Very limited Slope Frost action	 1.00 0.50	Very limited Slope Cutbanks cave	 1.00 0.10	Very limited Slope	 1.00
Terril-----	2	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Hamel-----	1	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L111A: Nicollet-----	85	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Clarion-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Webster-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L112A: Webster-----	85	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L112A: Glencoe-----	10	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Nicollet-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
L113B: Reedslake-----	75	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Le Sueur-----	10	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Reedslake, eroded---	10	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Cordova-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L114A: Hanlon, rarely flooded-----	85	Somewhat limited Frost action Flooding	 0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	 1.00 1.00	Not limited	
Coland, occasionally flooded-----	10	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	 1.00 0.60
Minneopa, rarely flooded-----	5	Somewhat limited Frost action Flooding	 0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	 1.00 1.00	Somewhat limited Droughty	 0.01

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L115A: Brownton-----	55	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
Lura-----	35	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.72 0.10	Very limited Too clayey Ponding Depth to saturated zone	 1.00 1.00 1.00
Marna-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
L116A: Le Sueur-----	45	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
Lerdal-----	40	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 0.60	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.12 0.10	Somewhat limited Depth to saturated zone	 0.60
Mazaska-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	 1.00 0.10 0.03	Very limited Depth to saturated zone	 1.00
Kilkenny-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.56 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.56
L117C2: Omsrud, eroded-----	65	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Omsrud-----	15	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
Terril-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L117C2: Delft-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Storden, eroded----	5	Somewhat limited Frost action Slope	 0.50 0.04	Somewhat limited Cutbanks cave Slope	 0.10 0.04	Somewhat limited Slope	 0.04
L118A: Rushriver, frequently flooded	85	Very limited Depth to saturated zone Frost action Flooding	 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	 1.00 1.00
Houghton, frequently flooded-----	5	Very limited Depth to saturated zone Subsidence Frost action Flooding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Flooding Cutbanks cave	 1.00 1.00 0.80 0.10	Very limited Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
Klossner, frequently flooded-----	5	Very limited Depth to saturated zone Subsidence Frost action Flooding Shrink-swell	 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Content of organic matter Flooding Cutbanks cave	 1.00 1.00 0.80 0.10	Very limited Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
Medo, frequently flooded-----	5	Very limited Depth to saturated zone Subsidence Frost action Flooding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Content of organic matter Flooding	 1.00 1.00 1.00 0.80	Very limited Flooding Content of organic matter Depth to saturated zone	 1.00 1.00 1.00
L119B: Angus-----	80	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Angus, eroded-----	10	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L119B: Cordova-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
Le Sueur-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Somewhat limited Depth to saturated zone	 0.78
L120A: Good Thunder-----	80	Very limited Frost action Shrink-swell	 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.15 0.10	Not limited	
Ocheyedan-----	10	Somewhat limited Frost action	 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Minnetonka-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.12 0.10	Very limited Depth to saturated zone	 1.00
L121B: Clarion-----	80	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Guckeen-----	15	Very limited Frost action Depth to saturated zone	 1.00 0.78	Very limited Depth to saturated zone Cutbanks cave Too clayey	 1.00 0.10 0.03	Somewhat limited Depth to saturated zone	 0.78
Marna-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
L122B: Reedslake-----	55	Somewhat limited Shrink-swell Frost action	 0.50 0.50	Somewhat limited Depth to saturated zone Cutbanks cave	 0.78 0.10	Not limited	
Estherville-----	25	Not limited		Very limited Cutbanks cave	 1.00	Somewhat limited Droughty	 0.12

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L122B: Le Sueur-----	10	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 0.78 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Somewhat limited Depth to saturated zone	0.78
Cordova-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Lowlein-----	5	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	
L123A: Belleville-----	85	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
Granby-----	15	Very limited Ponding Depth to saturated zone Frost action	1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Droughty	1.00 1.00 0.13
L124A: Glencoe mucky clay loam-----	85	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
Canisteo-----	10	Very limited Frost action Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00
Glencoe clay loam---	5	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Cutbanks cave	1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
L125A: Hanlon, rarely flooded-----	60	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L125A: Coland, occasionally flooded-----	25	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	 1.00 0.60
Minneopa, rarely flooded-----	15	Somewhat limited Frost action Flooding	 0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	 1.00 1.00	Somewhat limited Droughty	 0.01
L126A: Coland, occasionally flooded-----	80	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	 1.00 0.60
Minneopa, occasionally flooded-----	10	Somewhat limited Frost action Flooding	 0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	 1.00 1.00	Somewhat limited Droughty	 0.01
Havelock, occasionally flooded-----	5	Very limited Frost action Flooding Shrink-swell Depth to saturated zone	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Very limited Depth to saturated zone Flooding	 1.00 0.60
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Shrink-swell Frost action	 1.00 0.78 0.50 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	 0.78 0.60
L127A: Coland, frequently flooded-----	80	Very limited Frost action Flooding Depth to saturated zone Shrink-swell	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	 1.00 1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Minneopa, occasionally flooded-----	10	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Not limited	
Havelock, frequently flooded-----	5	Very limited Frost action Flooding Shrink-swell Depth to saturated zone	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 1.00 0.80 0.10	Very limited Flooding Depth to saturated zone	1.00 1.00
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Shrink-swell Frost action	1.00 0.78 0.50 0.50	Very limited Depth to saturated zone Flooding Cutbanks cave	1.00 0.60 0.10	Somewhat limited Depth to saturated zone Flooding	0.78 0.60
L128A: Mazaska-----	60	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Too clayey	1.00 0.10 0.03	Very limited Depth to saturated zone	1.00
Rolfe-----	30	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave Too clayey	1.00 1.00 0.10 0.02	Very limited Ponding Depth to saturated zone	1.00 1.00
Lerdal-----	10	Very limited Frost action Shrink-swell Depth to saturated zone	1.00 1.00 0.60	Very limited Depth to saturated zone Too clayey Cutbanks cave	1.00 0.12 0.10	Somewhat limited Depth to saturated zone	0.60
L129B: Terril-----	90	Somewhat limited Frost action	0.50	Somewhat limited Depth to saturated zone Cutbanks cave	0.78 0.10	Not limited	
Delft-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone	1.00

Table 10b.--Building Site Development--Continued

Map symbol and component name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L129B: Hamel-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
L130A: Okobojo mucky silty clay loam-----	75	Very limited Ponding Depth to saturated zone Frost action Shrink-swell	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Cutbanks cave	 1.00 1.00 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Okobojo silty clay loam-----	15	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	 1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	 1.00 1.00 0.12 0.10	Very limited Ponding Depth to saturated zone	 1.00 1.00
Brownton-----	5	Very limited Frost action Shrink-swell Depth to saturated zone	 1.00 1.00 1.00	Very limited Depth to saturated zone Too clayey Cutbanks cave	 1.00 0.28 0.10	Very limited Depth to saturated zone	 1.00
Spicer-----	5	Very limited Frost action Depth to saturated zone Shrink-swell	 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	 1.00 0.10	Very limited Depth to saturated zone	 1.00
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

Table 11a.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash----	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Leaching limitation	0.70	Restricted permeability	0.22	Restricted permeability	0.22
		Restricted permeability	0.30				
Delft-----	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Leaching limitation	0.70	Restricted permeability	0.22	Restricted permeability	0.22
		Restricted permeability	0.30				
Glencoe-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Leaching limitation	0.70				
Terril-----	5	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.05	Depth to saturated zone	0.05	Too steep for surface application	0.08
						Depth to saturated zone	0.05
L13A:							
Klossner, drained---	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low adsorption	1.00	Low adsorption	1.00	Low adsorption	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Leaching limitation	0.90	Too acid	0.21	Too acid	0.21
		Too acid	0.05				
Mineral soil, drained-----	15	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Leaching limitation	0.70				

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L13A: Houghton, drained---	5	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	 1.00 1.00 1.00 0.90 0.08	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31 	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31
L14A: Houghton, drained---	80	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	 1.00 1.00 1.00 0.90 0.08	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31 	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31
Klossner, drained---	10	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	 1.00 1.00 1.00 0.90 0.05	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21 	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding Leaching limitation	 1.00 1.00 0.70 	Very limited Depth to saturated zone Ponding	 1.00 1.00 	Very limited Depth to saturated zone Ponding	 1.00 1.00
L15A: Klossner, ponded----	30	Very limited Ponding Depth to saturated zone Low adsorption Leaching limitation	 1.00 1.00 1.00 0.90 	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00 	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Ponding Depth to saturated zone Leaching limitation Restricted permeability	 1.00 1.00 0.50 0.30 	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.22 	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.22
Glencoe, ponded-----	30	Very limited Ponding Depth to saturated zone Leaching limitation	 1.00 1.00 0.70 	Very limited Ponding Depth to saturated zone	 1.00 1.00 	Very limited Ponding Depth to saturated zone	 1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L15A: Houghton, ponded----	10	Very limited Ponding Depth to saturated zone Low adsorption Leaching limitation	 1.00 1.00 1.00 0.90	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
L16A: Muskego, ponded-----	30	Very limited Ponding Depth to saturated zone Low adsorption Restricted permeability Leaching limitation	 1.00 1.00 1.00 1.00 0.90	Very limited Ponding Depth to saturated zone Low adsorption Restricted permeability	 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption Restricted permeability	 1.00 1.00 1.00 1.00
Blue Earth, ponded--	30	Very limited Ponding Depth to saturated zone Leaching limitation	 1.00 1.00 0.70	Very limited Ponding Depth to saturated zone	 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, ponded----	30	Very limited Ponding Depth to saturated zone Low adsorption Leaching limitation	 1.00 1.00 1.00 0.90	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
Klossner, ponded----	10	Very limited Ponding Depth to saturated zone Low adsorption Leaching limitation	 1.00 1.00 1.00 0.90	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
L26B: Shorewood-----	90	Very limited Depth to saturated zone Restricted permeability	 1.00 0.89	Very limited Depth to saturated zone Restricted permeability	 1.00 0.78	Very limited Depth to saturated zone Restricted permeability Too steep for surface application	 1.00 0.78 0.08
Good Thunder-----	5	Somewhat limited Depth to saturated zone Restricted permeability	 0.87 0.74	Somewhat limited Depth to saturated zone Restricted permeability	 0.87 0.60	Somewhat limited Depth to saturated zone Restricted permeability	 0.87 0.60

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L26B: Minnetonka-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation Too acid	 1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.07
L36A: Hamel, overwash----	50	Very limited Depth to saturated zone Restricted permeability	 1.00 0.41	Very limited Depth to saturated zone Restricted permeability	 1.00 0.31	Very limited Depth to saturated zone Restricted permeability	 1.00 0.31
Hamel-----	43	Very limited Depth to saturated zone Leaching limitation Restricted permeability	 1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	 1.00 0.31	Very limited Depth to saturated zone Restricted permeability	 1.00 0.31
Terril-----	5	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Depth to saturated zone	 0.05
Glencoe-----	2	Very limited Depth to saturated zone Ponding Leaching limitation	 1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
L40B: Angus-----	45	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Too steep for surface application Depth to saturated zone	 0.08 0.05
Kilkenny-----	40	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 0.41 0.05	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 0.31 0.21	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 0.31 0.21
Lerdal-----	10	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.03	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.14	Very limited Depth to saturated zone Restricted permeability Too acid	 1.00 1.00 0.14

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L40B: Mazaska-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
L41C2: Lester, eroded-----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Kilkenny, eroded----	40	Somewhat limited Depth to saturated zone Restricted permeability Too acid Slope	0.86 0.41 0.05 0.04	Somewhat limited Depth to saturated zone Restricted permeability Too acid Slope	0.86 0.31 0.21 0.04	Very limited Too steep for surface application Depth to saturated zone Restricted permeability Too steep for sprinkler application Too acid	1.00 0.86 0.31 0.22 0.21
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05
Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 0.74 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
L41D2: Lester, eroded-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41D2: Kilkenny, eroded----	35	Very limited Slope Depth to saturated zone Restricted permeability Too acid	1.00 0.86 0.41 0.05	Very limited Slope Depth to saturated zone Restricted permeability Too acid	1.00 0.86 0.31 0.21	Very limited Too steep for surface application Too steep for sprinkler application Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.86 0.31 0.21
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05
Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 0.74 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
Ridgeton-----	5	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.40
L41E: Lester-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Kilkenny-----	40	Very limited Slope Depth to saturated zone Restricted permeability Too acid	1.00 0.86 0.41 0.05	Very limited Slope Depth to saturated zone Restricted permeability Too acid	1.00 0.86 0.31 0.21	Very limited Too steep for surface application Too steep for sprinkler application Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.86 0.31 0.21
Terril-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41E: Derrynane-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 0.74 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
Ridgeton-----	5	Somewhat limited Slope	0.96	Somewhat limited Slope	0.96	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.98
L48A: Derrynane, overwash	50	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 0.74 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
Derrynane-----	40	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 0.74 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
Glencoe-----	5	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Terril-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L49A: Klossner, surface drained-----	65	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 0.90	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L49A: Klossner, drained---	20	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	 1.00 1.00 1.00 0.90 0.05	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21 	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21
Mineral soil, drained-----	15	Very limited Depth to saturated zone Ponding Leaching limitation	 1.00 1.00 0.70 	Very limited Depth to saturated zone Ponding	 1.00 1.00 	Very limited Depth to saturated zone Ponding	 1.00 1.00
L50A: Houghton, surface drained-----	40	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation	 1.00 1.00 1.00 0.90 	Very limited Depth to saturated zone Low adsorption Ponding	 1.00 1.00 1.00 	Very limited Depth to saturated zone Low adsorption Ponding	 1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Depth to saturated zone Low adsorption Restricted permeability Ponding Leaching limitation	 1.00 1.00 1.00 1.00 0.90 	Very limited Depth to saturated zone Low adsorption Restricted permeability Ponding	 1.00 1.00 1.00 1.00 	Very limited Depth to saturated zone Low adsorption Restricted permeability Ponding	 1.00 1.00 1.00 1.00
Klossner, drained---	10	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	 1.00 1.00 1.00 0.90 0.05	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21 	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21
Mineral soil, drained-----	10	Very limited Depth to saturated zone Ponding Leaching limitation	 1.00 1.00 0.70 	Very limited Depth to saturated zone Ponding	 1.00 1.00 	Very limited Depth to saturated zone Ponding	 1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L51C2: Gladek, eroded-----	80	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Barrington-----	10	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone Too steep for surface application	0.87 0.08
Lester, eroded-----	5	Somewhat limited Slope Too acid	0.04 0.01	Somewhat limited Slope Too acid	0.04 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.22 0.01
Madelia-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L56A: Muskego, frequently flooded-----	45	Very limited Depth to saturated zone Flooding Low adsorption Restricted permeability Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Low adsorption Restricted permeability Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Restricted permeability Ponding	1.00 1.00 1.00 1.00 1.00
Klossner, frequently flooded-----	45	Very limited Depth to saturated zone Flooding Low adsorption Ponding Runoff	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Flooding Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Ponding	1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Depth to saturated zone Flooding Runoff Filtering capacity	1.00 1.00 0.40 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L57A: Medo, drained-----	80	Not rated		Not rated		Not rated	
Mineral soil, drained-----	15	Very limited Filtering capacity Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.70	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Houghton, drained---	5	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Too acid	1.00 1.00 1.00 1.00 0.90 0.08	Very limited Depth to saturated zone Low adsorption Ponding Too acid	1.00 1.00 1.00 1.00 0.31	Very limited Depth to saturated zone Low adsorption Ponding Too acid	1.00 1.00 1.00 1.00 0.31
L63A: Klossner-----	85	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.90	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00
Lura-----	10	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Brownnton-----	5	Very limited Restricted permeability Depth to saturated zone Leaching limitation	1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone	1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00 1.00
L64A: Tadkee-----	50	Very limited Filtering capacity Depth to saturated zone Leaching limitation	1.00 1.00 1.00 0.70	Very limited Filtering capacity Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L64A: Tadkee, depressional	36	Very limited Filtering capacity Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.70	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00
Better drained soil	8	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
Granby-----	4	Very limited Filtering capacity Depth to saturated zone Ponding Leaching limitation Droughty	1.00 1.00 1.00 0.90 0.23	Very limited Filtering capacity Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 0.23	Very limited Filtering capacity Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 0.23
Less sandy soil----	2	Very limited Filtering capacity Depth to saturated zone Leaching limitation	1.00 1.00 0.70	Very limited Filtering capacity Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00
L73A: Blue Earth-----	80	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Belleville-----	10	Very limited Filtering capacity Depth to saturated zone Leaching limitation Restricted permeability	1.00 1.00 0.70 0.41	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31
Canisteo-----	10	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L74A:							
Estherville-----	87	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty	1.00 0.70
Hawick-----	10	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.94 0.45	Very limited Filtering capacity Droughty	1.00 0.94	Very limited Filtering capacity Droughty	1.00 0.94
Biscay-----	3	Very limited Depth to saturated zone Filtering capacity Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
L75B:							
Barrington-----	85	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone Too steep for surface application	0.87 0.08
Gladek-----	10	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Madelia-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L76B:							
Dickinson-----	80	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too steep for surface application Too acid	1.00 0.08 0.01
Litchfield-----	13	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.02	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L76B: Darfur-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	2	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L77A: Brownton-----	75	Very limited Restricted permeability Depth to saturated zone Leaching limitation	1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00
Marna-----	15	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Lura-----	10	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00
L78A: Canisteo-----	65	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Crippin-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	10	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A: Canisteo, depressional-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L79B: Clarion-----	65	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Clarion, eroded----	25	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Nicollet-----	8	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	2	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L80C2: Lester, eroded-----	75	Somewhat limited Slope Too acid	0.04 0.01	Somewhat limited Slope Too acid	0.04 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.22 0.01
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80C2: Hamel-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Reedslake-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Storden, eroded----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
L80D2: Lester, eroded-----	75	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
Storden, eroded----	8	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80D2: Hamel-----	2	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
L81A: Cordova-----	85	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Le Sueur-----	10	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01
Rolfe-----	5	Very limited Depth to saturated zone Restricted permeability Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07
L82A: Marna-----	85	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Barbert-----	10	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.11	Very limited Restricted permeability Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.42	Very limited Restricted permeability Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.42
Guckeen-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.74	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L83A: Webster-----	65	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	15	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canistee-----	10	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L84A: Glencoe-----	80	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Very poorly drained muck-----	10	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 0.90	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00
Canistee-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L85A: Nicollet-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L85A: Clarion-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L86A: Madelia-----	90	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Okoboji-----	5	Very limited Depth to saturated zone Ponding Leaching limitation Restricted permeability	1.00 1.00 0.50 0.30	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.22	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.22
Spicer-----	3	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Kingston-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L87A: Kingston-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Truman-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Madelia-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L88A: Lura-----	85	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation	 1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	 1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	 1.00 1.00 1.00
Brownnton-----	10	Very limited Restricted permeability Depth to saturated zone Leaching limitation	 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00
Organic soil-----	5	Very limited Depth to saturated zone Low adsorption Ponding Leaching limitation Restricted permeability	 1.00 1.00 1.00 0.90 0.89	Very limited Depth to saturated zone Low adsorption Ponding Restricted permeability	 1.00 1.00 1.00 0.78	Very limited Depth to saturated zone Low adsorption Ponding Restricted permeability	 1.00 1.00 1.00 0.78
L89A: Guckeen-----	82	Very limited Depth to saturated zone Restricted permeability	 1.00 0.74	Very limited Depth to saturated zone Restricted permeability	 1.00 0.60	Very limited Depth to saturated zone Restricted permeability	 1.00 0.60
Marna-----	10	Very limited Depth to saturated zone Restricted permeability Leaching limitation	 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00
Clarion clay loam---	8	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Depth to saturated zone	 0.05	Somewhat limited Too steep for surface application Depth to saturated zone	 0.08 0.05
L90A: Le Sueur-----	75	Very limited Depth to saturated zone Too acid	 1.00 0.01	Very limited Depth to saturated zone Too acid	 1.00 0.01	Very limited Depth to saturated zone Too acid	 1.00 0.01

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L90A: Cordova-----	13	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Reedslake-----	12	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L91A: Mazaska-----	85	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Lerdal-----	10	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.03	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14
Rolfe-----	5	Very limited Depth to saturated zone Restricted permeability Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07
L92A: Darfur-----	78	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Fieldon-----	10	Very limited Depth to saturated zone Filtering capacity Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Litchfield-----	5	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.02	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07
Webster-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Dassel-----	2	Very limited Depth to saturated zone Ponding Filtering capacity Leaching limitation	1.00 1.00 1.00 0.70	Very limited Depth to saturated zone Ponding Filtering capacity	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Filtering capacity	1.00 1.00 1.00
L93A: Muskego-----	82	Very limited Restricted permeability Depth to saturated zone Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.90	Very limited Restricted permeability Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00
Blue Earth-----	10	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Mineral soil, drained-----	5	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Belleville-----	3	Very limited Filtering capacity Depth to saturated zone Leaching limitation Restricted permeability	1.00 1.00 0.90 0.41	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L94A: Lowlein-----	75	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone	0.87	Somewhat limited Depth to saturated zone	0.87
Linder-----	15	Very limited Filtering capacity Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00
Dickinson-----	8	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too acid	1.00 0.01	Very limited Filtering capacity Too steep for surface application Too acid	1.00 0.08 0.01
Darfur-----	2	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L95E: Hawick-----	80	Very limited Filtering capacity Droughty Slope Leaching limitation	1.00 1.00 1.00 0.45	Very limited Filtering capacity Droughty Slope	1.00 1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 1.00 1.00
Estherville-----	10	Very limited Filtering capacity Slope Droughty	1.00 1.00 0.94	Very limited Filtering capacity Slope Droughty	1.00 1.00 0.94	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 1.00 0.94
Tomall-----	10	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
L96B: Estherville-----	55	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.70 0.08

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L96B: Hawick-----	35	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.94 0.45	Very limited Filtering capacity Droughty	1.00 0.94	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.94 0.08
Tomall-----	8	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
Biscay-----	2	Very limited Depth to saturated zone Filtering capacity Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
L97C: Hawick-----	60	Very limited Filtering capacity Droughty Leaching limitation Slope	1.00 0.94 0.45 0.04	Very limited Filtering capacity Droughty Slope	1.00 0.94 0.04	Very limited Filtering capacity Too steep for surface application Droughty Too steep for sprinkler application	1.00 1.00 0.94 0.22
Estherville-----	30	Very limited Filtering capacity Droughty Slope	1.00 0.70 0.04	Very limited Filtering capacity Droughty Slope	1.00 0.70 0.04	Very limited Too steep for surface application Filtering capacity Droughty Too steep for sprinkler application	1.00 1.00 0.70 0.22
Tomall-----	10	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
L98A: Crippin-----	50	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	40	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L98A: Canisteo-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L99B: Clarion-----	62	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Swanlake-----	25	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Nicollet-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Webster-----	3	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L100B: Clarion-----	45	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Estherville-----	35	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.70 0.08
Lowlein-----	5	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L100B: Nicollet-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Swanlake-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L101C2: Omsrud, eroded-----	40	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Hawick-----	30	Very limited Filtering capacity Droughty Leaching limitation Slope	1.00 0.94 0.45 0.04	Very limited Filtering capacity Droughty Slope	1.00 0.94 0.04	Very limited Filtering capacity Too steep for surface application Droughty Too steep for sprinkler application	1.00 1.00 0.94 0.22
Storden, eroded-----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Delft-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22
Terril-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101D2: Omsrud, eroded-----	40	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Hawick-----	25	Very limited Filtering capacity Slope Droughty Leaching limitation	1.00 1.00 0.94 0.45	Very limited Filtering capacity Slope Droughty	1.00 1.00 0.94	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 1.00 0.94
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	6	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
Delft-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22
Terril-----	4	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L102C2: Omsrud, eroded-----	45	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102C2: Storden, eroded-----	25	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Delft-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22
L102D2: Omsrud, eroded-----	45	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Omsrud-----	15	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102D2: Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
Delft-----	6	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22
Terril-----	6	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L103A: Fieldon-----	50	Very limited Depth to saturated zone Filtering capacity Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Filtering capacity	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
Canisteo-----	35	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L105C2: Lester, eroded-----	45	Somewhat limited Slope Too acid	0.04 0.01	Somewhat limited Slope Too acid	0.04 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.22 0.01

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105C2: Hawick-----	35	Very limited Filtering capacity Droughty Leaching limitation Slope	1.00 0.94 0.45 0.04	Very limited Filtering capacity Droughty Slope	1.00 0.94 0.04	Very limited Filtering capacity Too steep for surface application Droughty Too steep for sprinkler application	1.00 1.00 0.94 0.22
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Hamel-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Storden, eroded-----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
L105D2: Lester, eroded-----	45	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01
Hawick-----	35	Very limited Filtering capacity Slope Droughty Leaching limitation	1.00 1.00 0.94 0.45	Very limited Filtering capacity Slope Droughty	1.00 1.00 0.94	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Droughty	1.00 1.00 1.00 0.94

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105D2: Ridgeton-----	8	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
Hamel-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Storden, eroded----	5	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	2	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L106C2: Lester, eroded-----	62	Somewhat limited Slope Too acid	0.04 0.01	Somewhat limited Slope Too acid	0.04 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.22 0.01
Storden, eroded----	20	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106C2: Hamel-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Reedslake-----	3	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L106D2: Lester, eroded-----	62	Very limited Slope Too acid	1.00 0.01	Very limited Slope Too acid	1.00 0.01	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01
Storden, eroded-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	10	Somewhat limited Slope	0.63	Somewhat limited Slope	0.63	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
Terril-----	5	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Hamel-----	3	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L107A: Canisteo-----	50	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Harps-----	10	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Crippin-----	2	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L108A: Cordova-----	65	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Rolfe-----	30	Very limited Depth to saturated zone Restricted permeability Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07
Le Sueur-----	5	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L109A: Marna-----	65	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Barbert-----	30	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.11	Very limited Restricted permeability Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.42	Very limited Restricted permeability Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.42
Guckeen-----	5	Very limited Depth to saturated zone Restricted permeability	1.00 0.74	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
L110E: Lester-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Cokato-----	10	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Belview-----	6	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110E: Hamel-----	2	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Terril-----	2	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L110F: Lester-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	30	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Cokato-----	8	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Belview-----	4	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	2	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110F: Hamel-----	1	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
L111A: Nicollet-----	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Clarion-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L112A: Webster-----	85	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	10	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Nicollet-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
L113B: Reedslake-----	75	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Le Sueur-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L113B: Reedslake, eroded---	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Cordova-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
L114A: Hanlon, rarely flooded-----	85	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01	Somewhat limited Depth to saturated zone Flooding Filtering capacity	0.87 0.40 0.01	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01
Coland, occasionally flooded-----	10	Very limited Depth to saturated zone Leaching limitation Flooding	1.00 0.70 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	5	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.87 0.07	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.40 0.07	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.87 0.07
L115A: Brownton-----	55	Very limited Restricted permeability Depth to saturated zone Leaching limitation	1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00
Lura-----	35	Very limited Restricted permeability Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L115A: Marna-----	10	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
L116A: Le Sueur-----	45	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01
Lerdal-----	40	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.03	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14
Mazaska-----	10	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Kilkenny-----	5	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.41 0.05	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.31 0.21	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.31 0.21
L117C2: Omsrud, eroded-----	65	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Omsrud-----	15	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
Terril-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L117C2: Delft-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22
Storden, eroded----	5	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.22
L118A: Rushriver, frequently flooded	85	Very limited Depth to saturated zone Flooding Leaching limitation Filtering capacity	1.00 1.00 0.70 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01
Houghton, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.90	Very limited Depth to saturated zone Flooding Low adsorption Ponding Too acid	1.00 1.00 1.00 1.00 0.07	Very limited Depth to saturated zone Low adsorption Flooding Ponding Too acid	1.00 1.00 1.00 1.00 0.07
Klossner, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Low adsorption Ponding Leaching limitation	1.00 1.00 1.00 1.00 0.90	Very limited Depth to saturated zone Flooding Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Ponding	1.00 1.00 1.00 1.00
Medo, frequently flooded-----	5	Not rated		Not rated		Not rated	
L119B: Angus-----	80	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L119B: Angus, eroded-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Cordova-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Le Sueur-----	5	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01
L120A: Good Thunder-----	80	Somewhat limited Depth to saturated zone Restricted permeability	0.87 0.74	Somewhat limited Depth to saturated zone Restricted permeability	0.87 0.60	Somewhat limited Depth to saturated zone Restricted permeability	0.87 0.60
Ocheyedan-----	10	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05
Minnetonka-----	10	Very limited Depth to saturated zone Restricted permeability Leaching limitation Too acid	1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 1.00 0.07
L121B: Clarion-----	80	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Guckeen-----	15	Very limited Depth to saturated zone Restricted permeability	1.00 0.74	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L121B: Marna-----	5	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
L122B: Reedslake-----	55	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Estherville-----	25	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty	1.00 0.70	Very limited Filtering capacity Droughty Too steep for surface application	1.00 0.70 0.08
Le Sueur-----	10	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01	Very limited Depth to saturated zone Too acid	1.00 0.01
Cordova-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
Lowlein-----	5	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
L123A: Belleville-----	85	Very limited Filtering capacity Depth to saturated zone Leaching limitation Restricted permeability	1.00 1.00 0.70 0.41	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.31

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L123A: Granby-----	15	Very limited Filtering capacity Depth to saturated zone Ponding Leaching limitation Droughty	1.00 1.00 1.00 1.00 0.90 0.23	Very limited Filtering capacity Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 1.00 0.23	Very limited Filtering capacity Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 1.00 0.23
L124A: Glencoe mucky clay loam-----	85	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glencoe clay loam---	5	Very limited Depth to saturated zone Ponding Leaching limitation	1.00 1.00 1.00 0.70	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L125A: Hanlon, rarely flooded-----	60	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01	Somewhat limited Depth to saturated zone Flooding Filtering capacity	0.87 0.40 0.01	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01
Coland, occasionally flooded-----	25	Very limited Depth to saturated zone Leaching limitation Flooding	1.00 1.00 0.70 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	15	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.87 0.07	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.40 0.07	Very limited Filtering capacity Depth to saturated zone Droughty	1.00 0.87 0.07

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L126A: Coland, occasionally flooded-----	80	Very limited Depth to saturated zone Leaching limitation Flooding	1.00 0.70 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, occasionally flooded-----	10	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.60 0.07	Very limited Flooding Filtering capacity Depth to saturated zone Droughty	1.00 1.00 0.87 0.07	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.60 0.07
Havelock, occasionally flooded-----	5	Very limited Depth to saturated zone Leaching limitation Flooding Filtering capacity	1.00 0.70 0.60 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 0.60 0.01
Spillville, occasionally flooded-----	5	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
L127A: Coland, frequently flooded-----	80	Very limited Depth to saturated zone Flooding Leaching limitation	1.00 1.00 0.70	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 1.00
Minneopa, occasionally flooded-----	10	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.60 0.02	Very limited Flooding Filtering capacity Depth to saturated zone Droughty	1.00 1.00 0.87 0.02	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.87 0.60 0.02

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Havelock, frequently flooded-----	5	Very limited Depth to saturated zone Flooding Leaching limitation Filtering capacity	1.00 1.00 0.70 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01
Spillville, occasionally flooded-----	5	Very limited Depth to saturated zone Flooding	1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 0.60
L128A: Mazaska-----	60	Very limited Depth to saturated zone Restricted permeability Leaching limitation	1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00
Rolfe-----	30	Very limited Depth to saturated zone Restricted permeability Ponding Leaching limitation Too acid	1.00 1.00 1.00 0.50 0.02	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.07
Lerdal-----	10	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.03	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.14
L129B: Terril-----	90	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Depth to saturated zone	0.05	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Delft-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.30	Very limited Depth to saturated zone Restricted permeability	1.00 0.22	Very limited Depth to saturated zone Restricted permeability	1.00 0.22

Table 11a.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L129B: Hamel-----	5	Very limited Depth to saturated zone Leaching limitation Restricted permeability	1.00 0.70 0.41	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Very limited Depth to saturated zone Restricted permeability	1.00 0.31
L130A: Okoboji mucky silty clay loam-----	75	Very limited Depth to saturated zone Ponding Leaching limitation Restricted permeability	1.00 1.00 0.50 0.41	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.31	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.31
Okoboji silty clay loam-----	15	Very limited Depth to saturated zone Ponding Leaching limitation Restricted permeability	1.00 1.00 0.50 0.30	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.22	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.22
Brownton-----	5	Very limited Restricted permeability Depth to saturated zone Leaching limitation	1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00
Spicer-----	5	Very limited Depth to saturated zone Leaching limitation	1.00 0.70	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

Table 11b.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash-----	50	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Seepage	0.77	Depth to saturated zone	1.00	Restricted permeability	0.15
Delft-----	40	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Restricted permeability	1.00	Depth to saturated zone	1.00
		Seepage	0.77	Depth to saturated zone	1.00	Restricted permeability	0.15
Glencoe-----	5	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage	1.00	Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00		
		Too level	0.50				
Terril-----	5	Very limited		Very limited		Somewhat limited	
		Seepage	1.00	Depth to saturated zone	1.00	Too steep for surface application	0.08
		Depth to saturated zone	0.05	Restricted permeability	1.00	Depth to saturated zone	0.05
L13A:							
Klossner, drained---	80	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Low adsorption	1.00	Restricted permeability	1.00	Low adsorption	1.00
		Seepage	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00			Too acid	0.21
		Too level	0.50				
Mineral soil, drained-----	15	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00		
		Too level	0.50				

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L13A: Houghton, drained---	5	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 0.69	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31
L14A: Houghton, drained---	80	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 0.69	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.31
Klossner, drained---	10	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Too acid	 1.00 1.00 1.00 0.21
Mineral soil, drained-----	10	Very limited Seepage Depth to saturated zone Ponding Too level	 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
L15A: Klossner, ponded----	30	Very limited Ponding Depth to saturated zone Low adsorption Seepage Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
Okoboji, ponded-----	30	Very limited Seepage Ponding Depth to saturated zone Too level	 1.00 1.00 1.00 0.50	Very limited Ponding Restricted permeability Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.15
Glencoe, ponded-----	30	Very limited Ponding Depth to saturated zone Seepage Too level	 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L15A: Houghton, ponded----	10	Very limited Ponding Depth to saturated zone Low adsorption Seepage Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.69	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
L16A: Muskego, ponded-----	30	Very limited Seepage Ponding Depth to saturated zone Low adsorption Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Restricted permeability Depth to saturated zone	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption Restricted permeability	 1.00 1.00 1.00 0.96
Blue Earth, ponded--	30	Very limited Seepage Ponding Depth to saturated zone Too level	 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	 1.00 1.00
Houghton, ponded----	30	Very limited Ponding Depth to saturated zone Low adsorption Seepage Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 0.69	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
Klossner, ponded----	10	Very limited Ponding Depth to saturated zone Low adsorption Seepage Too level	 1.00 1.00 1.00 1.00 0.50	Very limited Ponding Depth to saturated zone Restricted permeability	 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Low adsorption	 1.00 1.00 1.00
L26B: Shorewood-----	90	Very limited Depth to saturated zone Seepage	 1.00 0.77	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too steep for surface application	 1.00 0.60 0.08
Good Thunder-----	5	Somewhat limited Depth to saturated zone Seepage	 0.87 0.69	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00	Somewhat limited Depth to saturated zone Restricted permeability	 0.87 0.43

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L26B: Minnetonka-----	5	Very limited Depth to saturated zone Seepage Too acid	1.00 0.77 0.07	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.96 0.07
L36A: Hamel, overwash----	50	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Hamel-----	43	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.05
Glencoe-----	2	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L40B: Angus-----	45	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Kilkenny-----	40	Very limited Depth to saturated zone Seepage Too acid	1.00 0.69 0.21	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.21 0.21
Lerdal-----	10	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.94 0.14
Mazaska-----	5	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41C2: Lester, eroded-----	45	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Kilkenny, eroded----	40	Somewhat limited Depth to saturated zone Seepage Too steep for surface application Too acid	0.86 0.69 0.50 0.21	Very limited Restricted permeability Slope Depth to saturated zone	1.00 1.00 0.14	Very limited Too steep for surface application Depth to saturated zone Too steep for sprinkler application Too acid Restricted permeability	1.00 0.86 0.50 0.21 0.21
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.05
Derrynane-----	5	Very limited Depth to saturated zone Seepage	1.00 0.39	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
L41D2: Lester, eroded-----	45	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Kilkenny, eroded----	35	Very limited Too steep for surface application Depth to saturated zone Seepage Too acid	1.00 0.86 0.69 0.21	Very limited Slope Restricted permeability Depth to saturated zone	1.00 1.00 0.14	Very limited Too steep for surface application Too steep for sprinkler application Depth to saturated zone Too acid Restricted permeability	1.00 1.00 0.86 0.21 0.21
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41D2: Derrynane-----	5	Very limited Depth to saturated zone Seepage	1.00 0.39	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Ridgeton-----	5	Very limited Seepage Too steep for surface application	1.00 0.78	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.78
L41E: Lester-----	45	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Kilkenny-----	40	Very limited Too steep for surface application Depth to saturated zone Seepage Too acid	1.00 0.86 0.69 0.21	Very limited Slope Restricted permeability Depth to saturated zone	1.00 1.00 0.14	Very limited Too steep for surface application Too steep for sprinkler application Depth to saturated zone Too acid Restricted permeability	1.00 1.00 0.86 0.21 0.21
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.05
Derrynane-----	5	Very limited Depth to saturated zone Seepage	1.00 0.39	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Ridgeton-----	5	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L48A: Derrynane, overwash	50	Very limited Depth to saturated zone Seepage	1.00 0.39	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Derrynane-----	40	Very limited Depth to saturated zone Seepage	1.00 0.39	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Glencoe-----	5	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L49A: Klossner, surface drained-----	65	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00
Klossner, drained---	20	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Too acid	1.00 1.00 1.00 0.21
Mineral soil, drained-----	15	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L50A: Houghton, surface drained-----	40	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00 0.69	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00
Muskego, surface drained-----	40	Very limited Seepage Depth to saturated zone Low adsorption Ponding Too level	1.00 1.00 1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Restricted permeability	1.00 1.00 1.00 1.00 0.96
Klossner, drained---	10	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Too acid	1.00 1.00 1.00 1.00 0.21
Mineral soil, drained-----	10	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00 1.00
L51C2: Gladek, eroded-----	80	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Barrington-----	10	Very limited Seepage Depth to saturated zone	1.00 0.87	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone Too steep for surface application	0.87 0.08
Lester, eroded-----	5	Very limited Seepage Too steep for surface application Too acid	1.00 0.50 0.01	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.50 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L51C2: Madelia-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L56A: Muskego, frequently flooded-----	45	Very limited Flooding Seepage Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Ponding Restricted permeability	1.00 1.00 1.00 1.00 0.96
Klossner, frequently flooded-----	45	Very limited Flooding Depth to saturated zone Low adsorption Seepage Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Ponding	1.00 1.00 1.00 1.00
Suckercreek, frequently flooded	10	Very limited Flooding Seepage Depth to saturated zone Too level	1.00 1.00 1.00 0.50	Very limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 0.31	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01
L57A: Medo, drained-----	80	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.68	Not rated	
Mineral soil, drained-----	15	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.31	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00
Houghton, drained---	5	Very limited Depth to saturated zone Low adsorption Seepage Ponding Too level	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.69	Very limited Depth to saturated zone Low adsorption Ponding Too acid	1.00 1.00 1.00 0.31

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L63A: Klossner-----	85	Very limited Depth to saturated zone Low adsorption Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00
Lura-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94
Brownton-----	5	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
L64A: Tadkee-----	50	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00
Tadkee, depressional	36	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00
Better drained soil	8	Very limited Seepage Depth to saturated zone	1.00 0.87	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
Granby-----	4	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00
Less sandy soil----	2	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L73A:							
Blue Earth-----	80	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Seepage	1.00	Restricted permeability	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00		
Belleville-----	10	Very limited Seepage	1.00	Very limited Restricted permeability	1.00	Very limited Filtering capacity	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
						Restricted permeability	0.21
Canisteo-----	10	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Seepage	1.00	Restricted permeability	1.00		
L74A:							
Estherville-----	87	Very limited Seepage	1.00	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity	1.00
Hawick-----	10	Very limited Seepage	1.00	Not limited		Very limited Filtering capacity	1.00
Biscay-----	3	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Seepage	1.00	Restricted permeability	1.00	Filtering capacity	1.00
L75B:							
Barrington-----	85	Very limited Seepage	1.00	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.87
		Depth to saturated zone	0.87	Restricted permeability	1.00	Too steep for surface application	0.08
Gladek-----	10	Very limited Seepage	1.00	Very limited Restricted permeability	1.00	Very limited Too steep for surface application	1.00
		Too steep for surface application	0.50	Slope	1.00	Too steep for sprinkler application	0.50
Madelia-----	5	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
		Seepage	1.00	Restricted permeability	1.00		

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L76B: Dickinson-----	80	Very limited Seepage Too acid	1.00 0.01	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity Too steep for surface application Too acid	1.00 0.08 0.01
Litchfield-----	13	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07
Darfur-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Clarion-----	2	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L77A: Brownston-----	75	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Marna-----	15	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Lura-----	10	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94
L78A: Canisteo-----	65	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Crippin-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A: Glencoe-----	10	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canisteo, depressional-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Webster-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L79B: Clarion-----	65	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Clarion, eroded-----	25	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Nicollet-----	8	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Webster-----	2	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80C2: Lester, eroded-----	75	Very limited Seepage Too steep for surface application Too acid	1.00 0.50 0.01	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.50 0.01
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Hamel-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Reedslake-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Storden, eroded-----	5	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
L80D2: Lester, eroded-----	75	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.01	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01
Ridgeton-----	10	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80D2: Storden, eroded-----	8	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Hamel-----	2	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L81A: Cordova-----	85	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Le Sueur-----	10	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.01
Rolfe-----	5	Very limited Seepage Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.96 0.07
L82A: Marna-----	85	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Barbert-----	10	Very limited Depth to saturated zone Seepage Ponding Too acid	1.00 1.00 1.00 0.42	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.94 0.42

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L82A: Guckeen-----	5	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
L83A: Webster-----	65	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	15	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canistee-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L84A: Glencoe-----	80	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Very poorly drained muck-----	10	Very limited Depth to saturated zone Low adsorption Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00
Canistee-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Harps-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L85A: Nicollet-----	85	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Clarion-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L86A: Madelia-----	90	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Okoboji-----	5	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.77	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15
Spicer-----	3	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Kingston-----	2	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L87A: Kingston-----	85	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Truman-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L87A: Madelia-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L88A: Lura-----	85	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94
Brownton-----	10	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Organic soil-----	5	Very limited Depth to saturated zone Low adsorption Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Restricted permeability	1.00 1.00 1.00 0.60
L89A: Guckeen-----	82	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Marna-----	10	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Clarion clay loam---	8	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L90A: Le Sueur-----	75	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.01
Cordova-----	13	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L90A: Reedslake-----	12	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L91A: Mazaska-----	85	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Lerdal-----	10	Very limited Depth to saturated zone Seepage Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.94 0.14
Rolfe-----	5	Very limited Seepage Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.96 0.07
L92A: Darfur-----	78	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Fieldon-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00
Litchfield-----	5	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.07	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.07
Webster-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Dassel-----	2	Very limited Seepage Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 1.00 0.32	Very limited Depth to saturated zone Ponding Filtering capacity	1.00 1.00 1.00
L93A: Muskego-----	82	Very limited Seepage Depth to saturated zone Low adsorption Ponding	1.00 1.00 1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Ponding Restricted permeability	1.00 1.00 1.00 0.94
Blue Earth-----	10	Very limited Depth to saturated zone Seepage Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Mineral soil, drained-----	5	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Belleville-----	3	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.21
L94A: Lowlein-----	75	Very limited Seepage Depth to saturated zone	1.00 0.87	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.87
Linder-----	15	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 1.00
Dickinson-----	8	Very limited Seepage Too acid	1.00 0.01	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity Too steep for surface application Too acid	1.00 0.08 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L94A: Darfur-----	2	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L95E: Hawick-----	80	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00
Estherville-----	10	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 0.31	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00
Tomall-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity	1.00
L96B: Estherville-----	55	Very limited Seepage	1.00	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity Too steep for surface application	1.00 0.08
Hawick-----	35	Very limited Seepage	1.00	Not limited		Very limited Filtering capacity Too steep for surface application	1.00 0.08
Tomall-----	8	Very limited Seepage	1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity	1.00
Biscay-----	2	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L97C: Hawick-----	60	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.50
Estherville-----	30	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Slope Restricted permeability	1.00 0.32	Very limited Too steep for surface application Filtering capacity Too steep for sprinkler application	1.00 1.00 0.50
Tomall-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity	1.00
L98A: Crippin-----	50	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Nicollet-----	40	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Canisteo-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Clarion-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L99B: Clarion-----	62	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L99B: Swanlake-----	25	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Nicollet-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Webster-----	3	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L100B: Clarion-----	45	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Estherville-----	35	Very limited Seepage	1.00	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity Too steep for surface application	1.00 0.08
Lowlein-----	5	Very limited Seepage Depth to saturated zone	1.00 0.87	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
Nicollet-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Swanlake-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101C2: Omsrud, eroded-----	40	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Hawick-----	30	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.50
Storden, eroded-----	20	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Delft-----	5	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L101D2: Omsrud, eroded-----	40	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Hawick-----	25	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101D2: Storden, eroded-----	20	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	6	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Delft-----	5	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Terril-----	4	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L102C2: Omsrud, eroded-----	45	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Storden, eroded-----	25	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Omsrud-----	15	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102C2: Delft-----	5	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
L102D2: Omsrud, eroded-----	45	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Storden, eroded-----	20	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Omsrud-----	15	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	8	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Delft-----	6	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Terril-----	6	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L103A: Fieldon-----	50	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Filtering capacity	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L103A: Canisteo-----	35	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Darfur-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	5	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L105C2: Lester, eroded-----	45	Very limited Seepage Too steep for surface application Too acid	1.00 0.50 0.01	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 0.50 0.01
Hawick-----	35	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.50
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Hamel-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Storden, eroded-----	5	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105D2: Lester, eroded-----	45	Very limited Seepage Too steep for surface application Too acid	 1.00 1.00 0.01	Very limited Slope Restricted permeability	 1.00 1.00 	Very limited Too steep for surface application Too steep for sprinkler application Too acid	 1.00 1.00 0.01
Hawick-----	35	Very limited Seepage Too steep for surface application	 1.00 1.00 	Very limited Slope	 1.00 	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	 1.00 1.00 1.00
Ridgeton-----	8	Very limited Seepage Too steep for surface application	 1.00 1.00 	Very limited Slope Restricted permeability	 1.00 1.00 	Very limited Too steep for surface application Too steep for sprinkler application	 1.00 1.00
Hamel-----	5	Very limited Seepage Depth to saturated zone	 1.00 1.00 	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00 	Very limited Depth to saturated zone Restricted permeability	 1.00 0.21
Storden, eroded-----	5	Very limited Seepage Too steep for surface application	 1.00 1.00 	Very limited Slope Restricted permeability	 1.00 1.00 	Very limited Too steep for surface application Too steep for sprinkler application	 1.00 1.00
Terril-----	2	Very limited Seepage Depth to saturated zone	 1.00 0.05 	Very limited Depth to saturated zone Restricted permeability Slope	 1.00 1.00 0.12 	Somewhat limited Too steep for surface application Depth to saturated zone	 0.32 0.05
L106C2: Lester, eroded-----	62	Very limited Seepage Too steep for surface application Too acid	 1.00 0.50 0.01	Very limited Restricted permeability Slope	 1.00 1.00 	Very limited Too steep for surface application Too steep for sprinkler application Too acid	 1.00 0.50 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106C2: Storden, eroded-----	20	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Hamel-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Reedslake-----	3	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
L106D2: Lester, eroded-----	62	Very limited Seepage Too steep for surface application Too acid	1.00 1.00 0.01	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.01
Storden, eroded-----	20	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	10	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	5	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106D2: Hamel-----	3	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L107A: Canisteo-----	50	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	35	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Harps-----	10	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Canisteo, depressional-----	3	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Crippin-----	2	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L108A: Cordova-----	65	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Rolfe-----	30	Very limited Seepage Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.96 0.07
Le Sueur-----	5	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L109A: Marna-----	65	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Barbert-----	30	Very limited Depth to saturated zone Seepage Ponding Too acid	1.00 1.00 1.00 0.42	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.94 0.42
Guckeen-----	5	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
L110E: Lester-----	50	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	30	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Cokato-----	10	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Belview-----	6	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Hamel-----	2	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110E: Terril-----	2	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
L110F: Lester-----	55	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Ridgeton-----	30	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Cokato-----	8	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Belview-----	4	Very limited Seepage Too steep for surface application	1.00 1.00	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Terril-----	2	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Hamel-----	1	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L111A: Nicollet-----	85	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L111A: Clarion-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Webster-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L112A: Webster-----	85	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe-----	10	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Nicollet-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
L113B: Reedslake-----	75	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Le Sueur-----	10	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Reedslake, eroded---	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.12	Somewhat limited Too steep for surface application Depth to saturated zone	0.32 0.05
Cordova-----	5	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L114A: Hanlon, rarely flooded-----	85	Very limited Seepage Depth to saturated zone Flooding	1.00 0.87 0.40	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01
Coland, occasionally flooded-----	10	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	5	Very limited Seepage Depth to saturated zone Flooding	1.00 0.87 0.40	Very limited Depth to saturated zone Restricted permeability	1.00 0.32	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
L115A: Brownton-----	55	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Lura-----	35	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.94
Marna-----	10	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L116A: Le Sueur-----	45	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.01
Lerdal-----	40	Very limited Depth to saturated zone Seepage Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.94 0.14

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L116A: Mazaska-----	10	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Kilkenny-----	5	Very limited Depth to saturated zone Seepage Too acid	1.00 0.69 0.21	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.21 0.21
L117C2: Omsrud, eroded-----	65	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Omsrud-----	15	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
Terril-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Delft-----	5	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Storden, eroded-----	5	Very limited Seepage Too steep for surface application	1.00 0.50	Very limited Restricted permeability Slope	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 0.50
L118A: Rushriver, frequently flooded	85	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 0.31	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L118A: Houghton, frequently flooded-----	5	Very limited Flooding Depth to saturated zone Low adsorption Seepage Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 1.00 0.69 	Very limited Depth to saturated zone Low adsorption Flooding Ponding Too acid	 1.00 1.00 1.00 1.00 0.07
Klossner, frequently flooded-----	5	Very limited Flooding Depth to saturated zone Low adsorption Seepage Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Restricted permeability Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Low adsorption Flooding Ponding	 1.00 1.00 1.00 1.00
Medo, frequently flooded-----	5	Very limited Flooding Depth to saturated zone Low adsorption Seepage Ponding	 1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Ponding Restricted permeability	 1.00 1.00 1.00 0.68 	Not rated	
L119B: Angus-----	80	Very limited Seepage Depth to saturated zone	 1.00 0.05 	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	Somewhat limited Too steep for surface application Depth to saturated zone	 0.08 0.05
Angus, eroded-----	10	Very limited Seepage Depth to saturated zone	 1.00 0.05 	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	Somewhat limited Too steep for surface application Depth to saturated zone	 0.08 0.05
Cordova-----	5	Very limited Depth to saturated zone Seepage	 1.00 0.69	Very limited Restricted permeability Depth to saturated zone	 1.00 1.00 	Very limited Depth to saturated zone Restricted permeability	 1.00 0.21
Le Sueur-----	5	Very limited Seepage Depth to saturated zone Too acid	 1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	 1.00 1.00 	Very limited Depth to saturated zone Too acid	 1.00 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L120A: Good Thunder-----	80	Somewhat limited Depth to saturated zone Seepage	0.87 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Somewhat limited Depth to saturated zone Restricted permeability	0.87 0.43
Ocheyedan-----	10	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Depth to saturated zone	0.05
Minnetonka-----	10	Very limited Depth to saturated zone Seepage Too acid	1.00 0.77 0.07	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.96 0.07
L121B: Clarion-----	80	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Guckeen-----	15	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.43
Marna-----	5	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
L122B: Reedslake-----	55	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05
Estherville-----	25	Very limited Seepage	1.00	Somewhat limited Restricted permeability	0.32	Very limited Filtering capacity Too steep for surface application	1.00 0.08
Le Sueur-----	10	Very limited Seepage Depth to saturated zone Too acid	1.00 1.00 0.01	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Too acid	1.00 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L122B: Cordova-----	5	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
Lowlein-----	5	Very limited Seepage Depth to saturated zone	1.00 0.87	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
L123A: Belleville-----	85	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Restricted permeability	1.00 1.00 0.21
Granby-----	15	Very limited Seepage Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00
L124A: Glencoe mucky clay loam-----	85	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Canisteo-----	10	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
Glencoe clay loam---	5	Very limited Depth to saturated zone Seepage Ponding Too level	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
L125A: Hanlon, rarely flooded-----	60	Very limited Seepage Depth to saturated zone Flooding	1.00 0.87 0.40	Very limited Depth to saturated zone Restricted permeability	1.00 0.31	Somewhat limited Depth to saturated zone Filtering capacity	0.87 0.01

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L125A: Coland, occasionally flooded-----	25	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, rarely flooded-----	15	Very limited Seepage Depth to saturated zone Flooding	1.00 0.87 0.40	Very limited Depth to saturated zone Restricted permeability	1.00 1.00 0.32	Very limited Filtering capacity Depth to saturated zone	1.00 0.87
L126A: Coland, occasionally flooded-----	80	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
Minneopa, occasionally flooded-----	10	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 0.87	Very limited Depth to saturated zone Flooding Restricted permeability	1.00 1.00 0.60 0.32	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 0.87 0.60
Havelock, occasionally flooded-----	5	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 0.60 0.01
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
L127A: Coland, frequently flooded-----	80	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Flooding	1.00 1.00

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Minneopa, occasionally flooded-----	10	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 0.87	Very limited Depth to saturated zone Flooding Restricted permeability	1.00 0.60 0.32	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 0.87 0.60
Havelock, frequently flooded-----	5	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Restricted permeability	1.00 1.00 1.00	Very limited Depth to saturated zone Flooding Filtering capacity	1.00 1.00 0.01
Spillville, occasionally flooded-----	5	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 0.60	Very limited Depth to saturated zone Flooding	1.00 0.60
L128A: Mazaska-----	60	Very limited Depth to saturated zone Seepage	1.00 0.69	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.96
Rolfe-----	30	Very limited Seepage Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 0.07	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability Too acid	1.00 1.00 0.96 0.07
Lerdal-----	10	Very limited Depth to saturated zone Seepage Too acid	1.00 1.00 0.14	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.94 0.14
L129B: Terril-----	90	Very limited Seepage Depth to saturated zone	1.00 0.05	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Somewhat limited Too steep for surface application Depth to saturated zone	0.08 0.05

Table 11b.--Agricultural Waste Management--Continued

Map symbol and component name	Pct. of map unit	Overland flow of wastewater		Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L129B: Delft-----	5	Very limited Depth to saturated zone Seepage	1.00 0.77	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.15
Hamel-----	5	Very limited Seepage Depth to saturated zone	1.00 1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.21
L130A: Okobojo mucky silty clay loam-----	75	Very limited Seepage Depth to saturated zone Ponding Too level	1.00 1.00 1.00 0.50	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.21
Okobojo silty clay loam-----	15	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.77	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.15
Brownston-----	5	Very limited Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 0.94
Spicer-----	5	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone	1.00
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

Table 12a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
GP:					
Pits, gravel-----	80	Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated	
L5A:					
Delft, overwash-----	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Delft-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L13A:					
Klossner, drained---	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mineral soil, drained-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Houghton, drained---	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L14A:					
Houghton, drained---	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, drained---	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mineral soil, drained-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L15A:					
Klossner, ponded----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Okobojo, ponded-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe, ponded-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Houghton, ponded----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L16A:					
Muskego, ponded-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blue Earth, ponded--	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Houghton, ponded----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, ponded----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L26B:					
Shorewood-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Good Thunder-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Minnetonka-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L36A:					
Hamel, overwash-----	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	43	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L36A:					
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L40B:					
Angus-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kilkenny-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lerdal-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mazaska-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L41C2:					
Lester, eroded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kilkenny, eroded----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Derrynane-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L41D2:					
Lester, eroded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kilkenny, eroded----	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Derrynane-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L41D2: Ridgeton-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L41E: Lester-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kilkenny-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Derrynane-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ridgeton-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L48A: Derrynane, overwash	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Derrynane-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L49A: Klossner, surface drained-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, drained---	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mineral soil, drained-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L50A:					
Houghton, surface drained-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Muskego, surface drained-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, drained---	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mineral soil, drained-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L51C2:					
Gladek, eroded-----	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Barrington-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lester, eroded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Madelia-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L56A:					
Muskego, frequently flooded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, frequently flooded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Suckercreek, frequently flooded	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.62
L57A:					
Medo, drained-----	80	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.43

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L57A: Mineral soil, drained-----	15	Poor Bottom layer Thickest layer	 0.00 0.00	Fair Bottom layer Thickest layer	 0.09 0.09
Houghton, drained---	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L63A: Klossner-----	85	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Lura-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Brownnton-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L64A: Tadkee-----	50	Poor Bottom layer Thickest layer	 0.00 0.00	Fair Bottom layer Thickest layer	 0.00 0.97
Tadkee, depressional	36	Poor Bottom layer Thickest layer	 0.00 0.00	Fair Bottom layer Thickest layer	 0.00 0.97
Better drained soil	8	Poor Bottom layer Thickest layer	 0.00 0.00	Fair Bottom layer Thickest layer	 0.00 0.22
Granby-----	4	Poor Bottom layer Thickest layer	 0.00 0.00	Fair Bottom layer Thickest layer	 0.18 0.62
Less sandy soil----	2	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L73A: Blue Earth-----	80	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Belleville-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Canisteo-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L74A:					
Estherville-----	87	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.10
		Bottom layer	0.05	Bottom layer	0.86
Hawick-----	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91
Biscay-----	3	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.08	Bottom layer	0.91
L75B:					
Barrington-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Gladek-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Madelia-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L76B:					
Dickinson-----	80	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.62
Litchfield-----	13	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.19
		Thickest layer	0.00	Thickest layer	0.57
Darfur-----	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.11
Clarion-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L77A:					
Brownnton-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marna-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lura-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L78A:					
Canisteo-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L78A:					
Crippin-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo, depressional-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Harps-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L79B:					
Clarion-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clarion, eroded-----	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nicollet-----	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L80C2:					
Lester, eroded-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Reedslake-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Storden, eroded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L80D2: Lester, eroded-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ridgeton-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Storden, eroded-----	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L81A: Cordova-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Le Sueur-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rolfe-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L82A: Marna-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Barbert-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Guckeen-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L83A: Webster-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L83A: Nicollet-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L84A: Glencoe-----	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Very poorly drained muck-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Harps-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L85A: Nicollet-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clarion-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L86A: Madelia-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Okoboji-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spicer-----	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kingston-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L87A: Kingston-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Truman-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L87A: Madelia-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L88A: Lura-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Brownton-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Organic soil-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L89A: Guckeen-----	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marna-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clarion clay loam---	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L90A: Le Sueur-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cordova-----	13	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Reedslake-----	12	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L91A: Mazaska-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lerdal-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rolfe-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L92A:					
Darfur-----	78	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.11
Fieldon-----	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
Litchfield-----	5	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.19
		Thickest layer	0.00	Thickest layer	0.57
Webster-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Dassel-----	2	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.99
L93A:					
Muskego-----	82	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Blue Earth-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Mineral soil, drained-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Belleville-----	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L94A:					
Lowlein-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Linder-----	15	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.17
Dickinson-----	8	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.62
Darfur-----	2	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.11
L95E:					
Hawick-----	80	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.05	Bottom layer	0.91

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L95E:					
Estherville-----	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.09
		Bottom layer	0.05	Bottom layer	0.86
Tomall-----	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.22
L96B:					
Estherville-----	55	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.10
		Bottom layer	0.05	Bottom layer	0.86
Hawick-----	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91
Tomall-----	8	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.22
Biscay-----	2	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.08	Bottom layer	0.91
L97C:					
Hawick-----	60	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91
Estherville-----	30	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.10
		Bottom layer	0.05	Bottom layer	0.86
Tomall-----	10	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.22
L98A:					
Crippin-----	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nicollet-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clarion-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L99B:					
Clarion-----	62	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L99B:					
Swanlake-----	25	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nicollet-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L100B:					
Clarion-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Estherville-----	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.10
		Bottom layer	0.05	Bottom layer	0.86
Lowlein-----	5	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.09
Nicollet-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Swanlake-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L101C2:					
Omsrud, eroded-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hawick-----	30	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91
Storden, eroded-----	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Delft-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L101D2: Omsrud, eroded-----	40	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Hawick-----	25	Fair Thickest layer Bottom layer	 0.00 0.05	Fair Thickest layer Bottom layer	 0.08 0.91
Storden, eroded-----	20	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Ridgeton-----	6	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Delft-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Terril-----	4	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L102C2: Omsrud, eroded-----	45	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Storden, eroded-----	25	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Omsrud-----	15	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Terril-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Delft-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L102D2: Omsrud, eroded-----	45	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Storden, eroded-----	20	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Omsrud-----	15	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L102D2: Ridgeton-----	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Delft-----	6	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	6	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L103A: Fieldon-----	50	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
Canisteo-----	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Darfur-----	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.08
		Thickest layer	0.00	Bottom layer	0.11
Glencoe-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L105C2: Lester, eroded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hawick-----	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91
Terril-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Storden, eroded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L105D2: Lester, eroded-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hawick-----	35	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.08
		Bottom layer	0.05	Bottom layer	0.91

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L105D2: Ridgeton-----	8	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Hamel-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Storden, eroded----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Terril-----	2	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L106C2: Lester, eroded-----	62	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Storden, eroded----	20	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Terril-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Hamel-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Reedslake-----	3	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
L106D2: Lester, eroded-----	62	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Storden, eroded----	20	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Ridgeton-----	10	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Terril-----	5	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00
Hamel-----	3	Poor Bottom layer Thickest layer	 0.00 0.00	Poor Bottom layer Thickest layer	 0.00 0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L107A:					
Canisteo-----	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Harps-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo, depressional-----	3	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Crippin-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L108A:					
Cordova-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rolfe-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Le Sueur-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L109A:					
Marna-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Barbert-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Guckeen-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L110E:					
Lester-----	50	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ridgeton-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cokato-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L110E:					
Belview-----	6	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L110F:					
Lester-----	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ridgeton-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cokato-----	8	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Belview-----	4	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	2	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	1	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L111A:					
Nicollet-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Clarion-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Webster-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L112A:					
Webster-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L112A: Nicollet-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L113B: Reedslake-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Le Sueur-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Reedslake, eroded---	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cordova-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L114A: Hanlon, rarely flooded-----	85	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.08
Coland, occasionally flooded-----	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.09
Minneopa, rarely flooded-----	5	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.10
		Thickest layer	0.00	Bottom layer	0.52
L115A: Brownton-----	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lura-----	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marna-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L116A: Le Sueur-----	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lerdal-----	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L116A:					
Mazaska-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Kilkenny-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L117C2:					
Omsrud, eroded-----	65	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Omsrud-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Terril-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Delft-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Storden, eroded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L118A:					
Rushriver, frequently flooded	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.06
		Thickest layer	0.00	Bottom layer	0.08
Houghton, frequently flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Klossner, frequently flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Medo, frequently flooded-----	5	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.91
L119B:					
Angus-----	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Angus, eroded-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L119B:					
Cordova-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Le Sueur-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L120A:					
Good Thunder-----	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Ocheyedan-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Minnetonka-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L121B:					
Clarion-----	80	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Guckeen-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Marna-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L122B:					
Reedslake-----	55	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Estherville-----	25	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.10
		Bottom layer	0.05	Bottom layer	0.86
Le Sueur-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Cordova-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lowlein-----	5	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.09
L123A:					
Belleville-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L123A: Granby-----	15	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.18
		Thickest layer	0.00	Thickest layer	0.87
L124A: Glencoe mucky clay loam-----	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Canisteo-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Glencoe clay loam---	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L125A: Hanlon, rarely flooded-----	60	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.06
		Thickest layer	0.00	Thickest layer	0.08
Coland, occasionally flooded-----	25	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.09
Minneopa, rarely flooded-----	15	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.10
		Thickest layer	0.00	Bottom layer	0.52
L126A: Coland, occasionally flooded-----	80	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.09
Minneopa, occasionally flooded-----	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.10
		Thickest layer	0.00	Bottom layer	0.52
Havelock, occasionally flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Spillville, occasionally flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L127A:					
Coland, frequently flooded-----	80	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.09
Minneopa, occasionally flooded-----	10	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.09
		Thickest layer	0.00	Bottom layer	0.99
Havelock, frequently flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
Spillville, occasionally flooded-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L128A:					
Mazaska-----	60	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Rolfe-----	30	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Lerdal-----	10	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L129B:					
Terril-----	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Delft-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Hamel-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
L130A:					
Okoboji mucky silty clay loam-----	75	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Okoboji silty clay loam-----	15	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 12a.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of gravel		Potential as source of sand	
		Rating class	Value	Rating class	Value
L130A:					
Brownnton-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Spicer-----	5	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
M-W:					
Water, miscellaneous	100	Not rated		Not rated	
U3B:					
Udorthents (cut and fill land)-----	100	Not rated		Not rated	
W:					
Water-----	100	Not rated		Not rated	

Table 12b.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash----	50	Good		Fair		Fair	
				Depth to saturated zone	0.14	Depth to saturated zone	0.14
				Shrink-swell	0.99		
Delft-----	40	Good		Poor		Poor	
				Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Shrink-swell	0.99		
Glencoe-----	5	Good		Poor		Poor	
				Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Low strength	0.00		
				Shrink-swell	0.93		
Terril-----	5	Good		Fair		Fair	
				Depth to saturated zone	0.88	Depth to saturated zone	0.88
L13A:							
Klossner, drained---	80	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Content of organic matter	0.00
		Water erosion	0.99			Depth to saturated zone	0.00
Mineral soil, drained-----	15	Fair		Poor		Poor	
		Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
				Shrink-swell	0.95		
Houghton, drained---	5	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Content of organic matter	0.00
						Depth to saturated zone	0.00
L14A:							
Houghton, drained---	80	Poor		Poor		Poor	
		Wind erosion	0.00	Depth to saturated zone	0.00	Content of organic matter	0.00
						Depth to saturated zone	0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Klossner, drained---	10	Poor Wind erosion Water erosion	0.00 0.99	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Mineral soil, drained-----	10	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone	0.00
L15A: Klossner, ponded----	30	Fair Water erosion	0.99	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Okoboji, ponded----	30	Fair Too clayey Water erosion	0.08 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Depth to saturated zone Too clayey	0.00 0.08
Glencoe, ponded----	30	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.93	Poor Depth to saturated zone	0.00
Houghton, ponded----	10	Good		Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
L16A: Muskego, ponded----	30	Poor Carbonate content	0.00	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Blue Earth, ponded--	30	Fair Carbonate content	0.80	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone Content of organic matter	0.00 0.94
Houghton, ponded----	30	Good		Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Klossner, ponded----	10	Fair Water erosion	0.99	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L26B: Shorewood-----	90	Poor Too clayey Too acid	0.00 0.97	Fair Depth to saturated zone Shrink-swell	0.14 0.76	Poor Too clayey Depth to saturated zone	0.00 0.14
Good Thunder-----	5	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.50 0.97 0.99	Fair Depth to saturated zone Shrink-swell	0.88 0.96	Poor Too clayey Depth to saturated zone	0.00 0.88
Minnetonka-----	5	Poor Low content of organic matter Too clayey Too acid	0.00 0.00 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.55	Poor Too clayey Depth to saturated zone	0.00 0.00
L36A: Hamel, overwash----	50	Good		Fair Depth to saturated zone	0.14	Fair Depth to saturated zone	0.14
Hamel-----	43	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Terril-----	5	Good		Good		Good	
Glencoe-----	2	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone	0.00
L40B: Angus-----	45	Fair Low content of organic matter Too acid Water erosion	0.12 0.97 0.99	Fair Shrink-swell	0.99	Good	
Kilkenny-----	40	Poor Too clayey Low content of organic matter Too acid	0.00 0.12 0.68	Fair Depth to saturated zone Shrink-swell	0.24 0.98	Poor Too clayey Depth to saturated zone	0.00 0.24
Lerdal-----	10	Poor Too clayey Low content of organic matter Too acid Carbonate content Water erosion	0.00 0.12 0.54 0.97 0.99	Fair Depth to saturated zone Shrink-swell	0.22 0.63	Poor Too clayey Depth to saturated zone Too acid	0.00 0.22 0.98

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L40B: Mazaska-----	5	Poor Too clayey Low content of organic matter Too acid Carbonate content	 0.00 0.12 0.68 0.97	Poor Depth to saturated zone Shrink-swell	 0.00 0.56	Poor Depth to saturated zone Too clayey	 0.00 0.00
L41C2: Lester, eroded-----	45	Fair Low content of organic matter Too acid Carbonate content	 0.88 0.97 0.97	Fair Shrink-swell	 0.97	Fair Slope	 0.96
Kilkenny, eroded----	40	Poor Too clayey Low content of organic matter Too acid	 0.00 0.50 0.68	Fair Depth to saturated zone Shrink-swell	 0.89 0.91	Poor Too clayey Depth to saturated zone Slope	 0.00 0.89 0.96
Terril-----	10	Good		Good		Good	
Derrynane-----	5	Poor Too clayey	 0.00	Poor Depth to saturated zone Shrink-swell	 0.00 0.41	Poor Depth to saturated zone Too clayey	 0.00 0.00
L41D2: Lester, eroded-----	45	Fair Low content of organic matter Too acid Carbonate content	 0.88 0.97 0.97	Fair Shrink-swell	 0.97	Poor Slope	 0.00
Kilkenny, eroded----	35	Poor Too clayey Low content of organic matter Too acid	 0.00 0.50 0.68	Fair Depth to saturated zone Shrink-swell	 0.89 0.91	Poor Slope Too clayey Depth to saturated zone	 0.00 0.00 0.89
Terril-----	10	Good		Good		Good	
Derrynane-----	5	Poor Too clayey	 0.00	Poor Depth to saturated zone Shrink-swell	 0.00 0.41	Poor Depth to saturated zone Too clayey	 0.00 0.00
Ridgeton-----	5	Good		Good		Fair Slope	 0.84
L41E: Lester-----	45	Fair Low content of organic matter Too acid Carbonate content	 0.88 0.97 0.97	Fair Slope Shrink-swell	 0.18 0.98	Poor Slope	 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41E: Kilkenny-----	40	Poor Too clayey Low content of organic matter Too acid	 0.00 0.12 0.68	Fair Slope Depth to saturated zone Shrink-swell	 0.18 0.89 0.99	Poor Slope Too clayey Depth to saturated zone	 0.00 0.00 0.89
Terril-----	5	Good		Good		Good	
Derrynane-----	5	Fair Too clayey	 0.82	Poor Depth to saturated zone Shrink-swell	 0.00 0.45	Poor Depth to saturated zone Too clayey	 0.00 0.82
Ridgeton-----	5	Good		Good		Fair Slope	 0.04
L48A: Derrynane, overwash	50	Poor Too clayey	 0.00	Fair Depth to saturated zone Shrink-swell	 0.14 0.26	Poor Too clayey Depth to saturated zone	 0.00 0.14
Derrynane-----	40	Poor Too clayey	 0.00	Poor Depth to saturated zone Shrink-swell	 0.00 0.41	Poor Depth to saturated zone Too clayey	 0.00 0.00
Glencoe-----	5	Good		Poor Depth to saturated zone Low strength Shrink-swell	 0.00 0.00 0.93	Poor Depth to saturated zone	 0.00
Terril-----	5	Good		Good		Good	
L49A: Klossner, surface drained-----	65	Poor Wind erosion Water erosion	 0.00 0.99	Poor Depth to saturated zone	 0.00	Poor Content of organic matter Depth to saturated zone	 0.00 0.00
Klossner, drained---	20	Poor Wind erosion Water erosion	 0.00 0.99	Poor Depth to saturated zone	 0.00	Poor Content of organic matter Depth to saturated zone	 0.00 0.00
Mineral soil, drained-----	15	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone Shrink-swell	 0.00 0.95	Poor Depth to saturated zone	 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L50A: Houghton, surface drained-----	40	Poor Wind erosion	0.00	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Muskego, surface drained-----	40	Poor Wind erosion Carbonate content	0.00 0.00	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Klossner, drained---	10	Poor Wind erosion Water erosion	0.00 0.99	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Mineral soil, drained-----	10	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone	0.00
L51C2: Gladek, eroded-----	80	Fair Low content of organic matter Water erosion Carbonate content	0.02 0.90 0.92	Fair Shrink-swell	0.99	Fair Slope	0.96
Barrington-----	10	Fair Low content of organic matter Water erosion	0.12 0.90	Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Lester, eroded-----	5	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Fair Slope	0.96
Madelia-----	5	Fair Low content of organic matter Too clayey Water erosion	0.12 0.98 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.98
L56A: Muskego, frequently flooded-----	45	Poor Carbonate content	0.00	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L56A: Klossner, frequently flooded-----	45	Fair Water erosion	0.99	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Suckercreek, frequently flooded	10	Good		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
L57A: Medo, drained-----	80	Poor Wind erosion Low content of organic matter	0.00 0.12	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
Mineral soil, drained-----	15	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Houghton, drained---	5	Poor Wind erosion	0.00	Poor Depth to saturated zone	0.00	Poor Content of organic matter Depth to saturated zone	0.00 0.00
L63A: Klossner-----	85	Poor Wind erosion	0.00	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Content of organic matter	0.00 0.00
Lura-----	10	Poor Too clayey	0.00	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Too clayey Depth to saturated zone	0.00 0.00
Brownton-----	5	Fair Too clayey	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.68	Poor Depth to saturated zone Too clayey	0.00 0.12
L64A: Tadkee-----	50	Poor Too sandy Wind erosion Low content of organic matter	0.00 0.00 0.12	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00
Tadkee, depressional	36	Poor Too sandy Wind erosion Low content of organic matter	0.00 0.00 0.12	Poor Depth to saturated zone	0.00	Poor Too sandy Depth to saturated zone	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L64A: Better drained soil	8	Poor Wind erosion Low content of organic matter Too sandy Too acid	 0.00 0.12 0.22 0.95	Fair Depth to saturated zone	 0.88	Fair Too sandy Depth to saturated zone	 0.22 0.88
Granby-----	4	Poor Wind erosion Low content of organic matter Too sandy Droughty	 0.00 0.00 0.36 0.77	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Too sandy	 0.00 0.36
Less sandy soil----	2	Poor Wind erosion Low content of organic matter	 0.00 0.12	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone	 0.00
L73A: Blue Earth-----	80	Fair Carbonate content	 0.80	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Carbonate content	 0.00 0.80
Belleville-----	10	Fair Too sandy Low content of organic matter	 0.01 0.12	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Too sandy	 0.00 0.01
Canisteeo-----	10	Fair Low content of organic matter Carbonate content	 0.12 0.97	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Rock fragments	 0.00 0.97
L74A: Estherville-----	87	Poor Too sandy Low content of organic matter Droughty	 0.00 0.12 0.30	Good		Poor Too sandy Rock fragments Hard to reclaim	 0.00 0.00 0.82
Hawick-----	10	Poor Too sandy Droughty Low content of organic matter	 0.00 0.06 0.12	Good		Poor Too sandy Rock fragments Hard to reclaim	 0.00 0.03 0.98
Biscay-----	3	Fair Low content of organic matter Carbonate content	 0.12 0.97	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Hard to reclaim	 0.00 0.68
L75B: Barrington-----	85	Fair Low content of organic matter Water erosion	 0.12 0.90	Fair Depth to saturated zone	 0.88	Fair Depth to saturated zone	 0.88

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L75B: Gladek-----	10	Fair Low content of organic matter Water erosion Carbonate content	0.02 0.90 0.92	Fair Shrink-swell	0.99	Fair Slope	0.96
Madelia-----	5	Fair Low content of organic matter Too clayey Water erosion	0.12 0.98 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.98
L76B: Dickinson-----	80	Fair Low content of organic matter Too acid	0.50 0.84	Good		Good	
Litchfield-----	13	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.95	Fair Depth to saturated zone	0.06	Poor Too sandy Depth to saturated zone	0.00 0.06
Darfur-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Clarion-----	2	Fair Low content of organic matter Water erosion	0.12 0.99	Good		Good	
L77A: Brownton-----	75	Fair Too clayey	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.68	Poor Depth to saturated zone Too clayey	0.00 0.12
Marna-----	15	Poor Too clayey Carbonate content	0.00 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.00
Lura-----	10	Poor Too clayey	0.00	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Too clayey Depth to saturated zone	0.00 0.00
L78A: Canisteo-----	65	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Crippin-----	10	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone	0.12	Fair Depth to saturated zone	0.12

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A: Glencoe-----	10	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
Canisteo, depressional-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Harps-----	5	Fair Low content of organic matter Carbonate content	0.12 0.32	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Webster-----	5	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
L79B: Clarion-----	65	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
Clarion, eroded-----	25	Fair Low content of organic matter Carbonate content Water erosion	0.88 0.97 0.99	Good		Good	
Nicollet-----	8	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98
Webster-----	2	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
L80C2: Lester, eroded-----	75	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Fair Slope	0.96
Terril-----	10	Good		Good		Good	
Hamel-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80C2: Reedslake-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
Storden, eroded----	5	Fair Low content of organic matter Carbonate content Water erosion	0.50 0.80 0.99	Fair Shrink-swell	0.90	Fair Carbonate content Slope	0.80 0.96
L80D2: Lester, eroded-----	75	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Poor Slope	0.00
Ridgeton-----	10	Good		Good		Fair Slope	0.37
Storden, eroded----	8	Fair Low content of organic matter Carbonate content Water erosion	0.50 0.80 0.99	Fair Shrink-swell	0.90	Poor Slope Carbonate content	0.00 0.80
Terril-----	5	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Hamel-----	2	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
L81A: Cordova-----	85	Fair Low content of organic matter Too acid Too clayey	0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Too clayey	0.00 0.94
Le Sueur-----	10	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
Rolfe-----	5	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.50 0.95 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.87	Poor Depth to saturated zone Too clayey	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L82A: Marna-----	85	Fair Too clayey Carbonate content	0.05 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.05
Barbert-----	10	Poor Too clayey Too acid	0.00 0.84	Poor Depth to saturated zone Shrink-swell	0.00 0.84	Poor Too clayey Depth to saturated zone	0.00 0.00
Guckeen-----	5	Fair Too clayey Low content of organic matter Water erosion	0.12 0.12 0.99	Fair Depth to saturated zone Shrink-swell	0.88 0.91	Fair Too clayey Depth to saturated zone	0.12 0.88
L83A: Webster-----	65	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
Glencoe-----	15	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
Canisteo-----	10	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Rock fragments	0.00 0.97
Nicollet-----	10	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98
L84A: Glencoe-----	80	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
Very poorly drained muck-----	10	Poor Wind erosion Low content of organic matter	0.00 0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Canisteo-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Harps-----	5	Fair Low content of organic matter Carbonate content	0.12 0.32	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L85A: Nicollet-----	85	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98
Clarion-----	10	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
Webster-----	5	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
L86A: Madelia-----	90	Fair Low content of organic matter Too clayey Water erosion	0.12 0.98 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.98
Okoboji-----	5	Fair Too clayey	0.05	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Depth to saturated zone Too clayey	0.00 0.05
Spicer-----	3	Fair Carbonate content Water erosion	0.97 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Carbonate content	0.00 0.97
Kingston-----	2	Fair Low content of organic matter Water erosion	0.12 0.99	Fair Depth to saturated zone	0.12	Fair Depth to saturated zone	0.12
L87A: Kingston-----	85	Fair Low content of organic matter Water erosion	0.12 0.99	Fair Depth to saturated zone	0.12	Fair Depth to saturated zone	0.12
Truman-----	10	Fair Low content of organic matter Water erosion	0.50 0.90	Good		Good	
Madelia-----	5	Fair Low content of organic matter Too clayey Water erosion	0.12 0.98 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.98
L88A: Lura-----	85	Poor Too clayey	0.00	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Too clayey Depth to saturated zone	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L88A: Brownton-----	10	Fair Too clayey	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.68	Poor Depth to saturated zone Too clayey	0.00 0.12
Organic soil-----	5	Poor Wind erosion Too clayey Low content of organic matter Water erosion	0.00 0.08 0.50 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.08
L89A: Guckeen-----	82	Fair Too clayey Low content of organic matter Water erosion	0.12 0.12 0.99	Fair Depth to saturated zone Shrink-swell	0.12 0.91	Fair Too clayey Depth to saturated zone	0.12 0.12
Marna-----	10	Fair Too clayey Carbonate content	0.05 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.05
Clarion clay loam---	8	Fair Low content of organic matter Water erosion	0.12 0.99	Good		Good	
L90A: Le Sueur-----	75	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
Cordova-----	13	Fair Low content of organic matter Too acid Too clayey	0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Too clayey	0.00 0.94
Reedslake-----	12	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
L91A: Mazaska-----	85	Poor Too clayey Low content of organic matter Too acid Carbonate content	0.00 0.12 0.68 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.56	Poor Depth to saturated zone Too clayey	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L91A: Lerdal-----	10	Poor Too clayey Low content of organic matter Too acid Carbonate content Water erosion	 0.00 0.12 0.54 0.97 0.99	Fair Depth to saturated zone Shrink-swell	 0.22 0.63	Poor Too clayey Depth to saturated zone Too acid	 0.00 0.22 0.98
Rolfe-----	5	Poor Too clayey Low content of organic matter Too acid Water erosion	 0.00 0.50 0.95 0.99	Poor Depth to saturated zone Shrink-swell	 0.00 0.87	Poor Depth to saturated zone Too clayey	 0.00 0.00
L92A: Darfur-----	78	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone	 0.00
Fieldon-----	10	Fair Low content of organic matter Carbonate content	 0.12 0.97	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Carbonate content	 0.00 0.97
Litchfield-----	5	Poor Too sandy Wind erosion Low content of organic matter Too acid	 0.00 0.00 0.12 0.95	Fair Depth to saturated zone	 0.06	Poor Too sandy Depth to saturated zone	 0.00 0.06
Webster-----	5	Fair Low content of organic matter Too clayey	 0.12 0.99	Poor Depth to saturated zone Shrink-swell	 0.00 0.99	Poor Depth to saturated zone Too clayey	 0.00 0.99
Dassel-----	2	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone	 0.00
L93A: Muskego-----	82	Poor Wind erosion Carbonate content	 0.00 0.00	Poor Depth to saturated zone Shrink-swell	 0.00 0.95	Poor Carbonate content Depth to saturated zone	 0.00 0.00
Blue Earth-----	10	Fair Carbonate content	 0.80	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Carbonate content	 0.00 0.80
Mineral soil, drained-----	5	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone Shrink-swell	 0.00 0.95	Poor Depth to saturated zone	 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L93A: Belleville-----	3	Fair Too sandy Low content of organic matter	0.01 0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.01
L94A: Lowlein-----	75	Fair Low content of organic matter	0.12	Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Linder-----	15	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone	0.06	Fair Depth to saturated zone Hard to reclaim	0.06 0.50
Dickinson-----	8	Fair Low content of organic matter Too acid	0.50 0.84	Good		Good	
Darfur-----	2	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
L95E: Hawick-----	80	Poor Too sandy Droughty Low content of organic matter	0.00 0.00 0.12	Fair Slope	0.68	Poor Too sandy Slope Rock fragments Hard to reclaim	0.00 0.00 0.03 0.98
Estherville-----	10	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Slope Rock fragments Hard to reclaim	0.00 0.00 0.00 0.82
Tomall-----	10	Good		Good		Fair Hard to reclaim	0.92
L96B: Estherville-----	55	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.30	Good		Poor Too sandy Rock fragments Hard to reclaim	0.00 0.00 0.82
Hawick-----	35	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Rock fragments Hard to reclaim	0.00 0.03 0.98
Tomall-----	8	Good		Good		Fair Hard to reclaim	0.92

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L96B: Biscay-----	2	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Hard to reclaim	0.00 0.68
L97C: Hawick-----	60	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Rock fragments Slope Hard to reclaim	0.00 0.03 0.96 0.98
Estherville-----	30	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.30	Good		Poor Too sandy Rock fragments Hard to reclaim Slope	0.00 0.00 0.82 0.96
Tomall-----	10	Good		Good		Fair Hard to reclaim	0.92
L98A: Crippin-----	50	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone	0.12	Fair Depth to saturated zone	0.12
Nicollet-----	40	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98
Canisteo-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Clarion-----	5	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
L99B: Clarion-----	62	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
Swanlake-----	25	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Carbonate content	0.97
Nicollet-----	10	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L99B: Webster-----	3	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
L100B: Clarion-----	45	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
Estherville-----	35	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.30	Good		Poor Too sandy Rock fragments Hard to reclaim	0.00 0.00 0.82
Lowleia-----	5	Fair Low content of organic matter	0.12	Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Nicollet-----	5	Fair Low content of organic matter Too clayey	0.12 0.98	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone Too clayey	0.12 0.98
Swanlake-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Carbonate content	0.97
Webster-----	5	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Too clayey	0.00 0.99
L101C2: Omsrud, eroded-----	40	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Hawick-----	30	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Rock fragments Slope Hard to reclaim	0.00 0.03 0.96 0.98
Storden, eroded-----	20	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Delft-----	5	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Terril-----	5	Good		Good		Good	

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101D2: Omsrud, eroded-----	40	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Hawick-----	25	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Slope Rock fragments Hard to reclaim	0.00 0.00 0.03 0.98
Storden, eroded-----	20	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Ridgeton-----	6	Good		Good		Fair Slope	0.37
Delft-----	5	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Terril-----	4	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
L102C2: Omsrud, eroded-----	45	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Storden, eroded-----	25	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Omsrud-----	15	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Terril-----	10	Good		Good		Good	
Delft-----	5	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
L102D2: Omsrud, eroded-----	45	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102D2: Storden, eroded-----	20	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Omsrud-----	15	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Ridgeton-----	8	Good		Good		Fair Slope	0.37
Delft-----	6	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Terril-----	6	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
L103A: Fieldon-----	50	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Canisteo-----	35	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Darfur-----	10	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
Glencoe-----	5	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
L105C2: Lester, eroded-----	45	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Fair Slope	0.96
Hawick-----	35	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Rock fragments Slope Hard to reclaim	0.00 0.03 0.96 0.98
Terril-----	10	Good		Good		Good	

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105C2: Hamel-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Storden, eroded----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
L105D2: Lester, eroded-----	45	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Poor Slope	0.00
Hawick-----	35	Poor Too sandy Droughty Low content of organic matter	0.00 0.06 0.12	Good		Poor Too sandy Slope Rock fragments Hard to reclaim	0.00 0.00 0.03 0.98
Ridgeton-----	8	Good		Good		Fair Slope	0.37
Hamel-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Storden, eroded----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Terril-----	2	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
L106C2: Lester, eroded-----	62	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Fair Slope	0.96
Storden, eroded----	20	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Terril-----	10	Good		Good		Good	
Hamel-----	5	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106C2: Reedslake-----	3	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
L106D2: Lester, eroded-----	62	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Poor Slope	0.00
Storden, eroded-----	20	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Poor Slope Carbonate content	0.00 0.97
Ridgeton-----	10	Good		Good		Fair Slope	0.37
Terril-----	5	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Hamel-----	3	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
L107A: Canistee-----	50	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Glencoe-----	35	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
Harps-----	10	Fair Low content of organic matter Carbonate content	0.12 0.32	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Canistee, depressional-----	3	Fair Low content of organic matter	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Crippin-----	2	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone	0.12	Fair Depth to saturated zone	0.12

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L108A: Cordova-----	65	Fair Low content of organic matter Too acid Too clayey	 0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	 0.00 0.97	Poor Depth to saturated zone Too clayey	 0.00 0.94
Rolfe-----	30	Poor Too clayey Low content of organic matter Too acid Water erosion	 0.00 0.50 0.95 0.99	Poor Depth to saturated zone Shrink-swell	 0.00 0.87	Poor Depth to saturated zone Too clayey	 0.00 0.00
Le Sueur-----	5	Fair Low content of organic matter Too acid Carbonate content	 0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	 0.12 0.98	Fair Depth to saturated zone	 0.12
L109A: Marna-----	65	Fair Too clayey Carbonate content	 0.05 0.97	Poor Depth to saturated zone Shrink-swell	 0.00 0.74	Poor Depth to saturated zone Too clayey	 0.00 0.05
Barbert-----	30	Poor Too clayey Too acid	 0.00 0.84	Poor Depth to saturated zone Shrink-swell	 0.00 0.84	Poor Too clayey Depth to saturated zone	 0.00 0.00
Guckeen-----	5	Fair Too clayey Low content of organic matter Water erosion	 0.12 0.12 0.99	Fair Depth to saturated zone Shrink-swell	 0.12 0.91	Fair Too clayey Depth to saturated zone	 0.12 0.12
L110E: Lester-----	50	Fair Low content of organic matter Too acid Carbonate content	 0.88 0.97 0.97	Fair Slope Shrink-swell	 0.32 0.98	Poor Slope	 0.00
Ridgeton-----	30	Good		Fair Slope	 0.92	Poor Slope	 0.00
Cokato-----	10	Fair Low content of organic matter Carbonate content Water erosion	 0.12 0.97 0.99	Fair Slope	 0.32	Poor Slope	 0.00
Belview-----	6	Fair Low content of organic matter Carbonate content	 0.12 0.97	Fair Slope	 0.32	Poor Slope Carbonate content	 0.00 0.97
Hamel-----	2	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone	 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110E: Terril-----	2	Good		Good		Good	
L110F: Lester-----	55	Fair Low content of organic matter Too acid	0.12 0.97	Poor Slope Shrink-swell	0.00 0.99	Poor Slope	0.00
Ridgeton-----	30	Good		Fair Slope	0.32	Poor Slope	0.00
Cokato-----	8	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Poor Slope	0.00	Poor Slope	0.00
Belview-----	4	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Slope	0.00	Poor Slope Carbonate content	0.00 0.97
Terril-----	2	Good		Good		Good	
Hamel-----	1	Fair Low content of organic matter	0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone	0.00
L111A: Nicollet-----	85	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.99	Fair Depth to saturated zone	0.12
Clarion-----	10	Fair Low content of organic matter Carbonate content Water erosion	0.12 0.97 0.99	Good		Good	
Webster-----	5	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone Too clayey	0.00 0.99
L112A: Webster-----	85	Fair Low content of organic matter Too clayey	0.12 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.95	Poor Depth to saturated zone Too clayey	0.00 0.99
Glencoe-----	10	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.93	Poor Depth to saturated zone	0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L112A: Nicollet-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.99	Fair Depth to saturated zone	0.12
L113B: Reedslake-----	75	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
Le Sueur-----	10	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
Reedslake, eroded---	10	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
Cordova-----	5	Fair Low content of organic matter Too acid Too clayey	0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Too clayey	0.00 0.94
L114A: Hanlon, rarely flooded-----	85	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Coland, occasionally flooded-----	10	Fair Too clayey	0.98	Poor Depth to saturated zone Shrink-swell	0.00 0.92	Poor Depth to saturated zone Too clayey	0.00 0.98
Minneopa, rarely flooded-----	5	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.93	Fair Depth to saturated zone	0.88	Poor Too sandy Rock fragments Depth to saturated zone	0.00 0.68 0.88
L115A: Brownton-----	55	Fair Too clayey	0.12	Poor Depth to saturated zone Shrink-swell	0.00 0.68	Poor Depth to saturated zone Too clayey	0.00 0.12
Lura-----	35	Poor Too clayey	0.00	Poor Depth to saturated zone Shrink-swell	0.00 0.12	Poor Too clayey Depth to saturated zone	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L115A: Marna-----	10	Fair Too clayey Carbonate content	0.05 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.05
L116A: Le Sueur-----	45	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
Lerdal-----	40	Poor Too clayey Low content of organic matter Too acid Carbonate content Water erosion	0.00 0.12 0.54 0.97 0.99	Fair Depth to saturated zone Shrink-swell	0.22 0.63	Poor Too clayey Depth to saturated zone Too acid	0.00 0.22 0.98
Mazaska-----	10	Poor Too clayey Low content of organic matter Too acid Carbonate content	0.00 0.12 0.68 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.56	Poor Depth to saturated zone Too clayey	0.00 0.00
Kilkenny-----	5	Poor Too clayey Low content of organic matter Too acid	0.00 0.12 0.68	Fair Depth to saturated zone Shrink-swell	0.24 0.98	Poor Too clayey Depth to saturated zone	0.00 0.24
L117C2: Omsrud, eroded-----	65	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Omsrud-----	15	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97
Terril-----	10	Good		Good		Good	
Delft-----	5	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone	0.00
Storden, eroded-----	5	Fair Low content of organic matter Carbonate content	0.12 0.97	Good		Fair Slope Carbonate content	0.96 0.97

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L118A: Rushriver, frequently flooded	85	Good		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Rock fragments	0.00 0.72
Houghton, frequently flooded-----	5	Poor Wind erosion	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter	0.00 0.00
Klossner, frequently flooded-----	5	Poor Wind erosion Water erosion	0.00 0.99	Poor Depth to saturated zone Shrink-swell	0.00 0.99	Poor Depth to saturated zone Content of organic matter	0.00 0.00
Medo, frequently flooded-----	5	Poor Wind erosion	0.00	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Hard to reclaim	0.00 0.00 0.92
L119B: Angus-----	80	Fair Low content of organic matter Too acid Water erosion	0.12 0.97 0.99	Fair Shrink-swell	0.99	Good	
Angus, eroded-----	10	Fair Low content of organic matter Too acid Carbonate content	0.88 0.97 0.97	Fair Shrink-swell	0.97	Good	
Cordova-----	5	Fair Low content of organic matter Too acid Too clayey	0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Too clayey	0.00 0.94
Le Sueur-----	5	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
L120A: Good Thunder-----	80	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.50 0.97 0.99	Fair Depth to saturated zone Shrink-swell	0.88 0.96	Poor Too clayey Depth to saturated zone	0.00 0.88

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L120A: Ocheyedan-----	10	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	
Minnetonka-----	10	Poor Low content of organic matter Too clayey Too acid	0.00 0.00 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.55	Poor Too clayey Depth to saturated zone	0.00 0.00
L121B: Clarion-----	80	Fair Low content of organic matter Water erosion	0.12 0.99	Fair Shrink-swell	0.98	Good	
Guckeen-----	15	Fair Too clayey Low content of organic matter Water erosion	0.12 0.12 0.99	Fair Depth to saturated zone Shrink-swell	0.12 0.91	Fair Too clayey Depth to saturated zone	0.12 0.12
Marna-----	5	Fair Too clayey Carbonate content	0.05 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.74	Poor Depth to saturated zone Too clayey	0.00 0.05
L122B: Reedslake-----	55	Fair Low content of organic matter Carbonate content	0.12 0.97	Fair Shrink-swell	0.99	Good	
Estherville-----	25	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.30	Good		Poor Too sandy Rock fragments Hard to reclaim	0.00 0.00 0.82
Le Sueur-----	10	Fair Low content of organic matter Too acid Carbonate content	0.12 0.97 0.97	Fair Depth to saturated zone Shrink-swell	0.12 0.98	Fair Depth to saturated zone	0.12
Cordova-----	5	Fair Low content of organic matter Too acid Too clayey	0.12 0.84 0.95	Poor Depth to saturated zone Shrink-swell	0.00 0.97	Poor Depth to saturated zone Too clayey	0.00 0.94
Lowlein-----	5	Fair Low content of organic matter	0.12	Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L123A: Belleville-----	85	Fair Too sandy Low content of organic matter	0.01 0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.01
Granby-----	15	Poor Wind erosion Low content of organic matter Too sandy Droughty	0.00 0.00 0.36 0.77	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.36
L124A: Glencoe mucky clay loam-----	85	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.96	Poor Depth to saturated zone	0.00
Canisteo-----	10	Fair Low content of organic matter Carbonate content	0.12 0.97	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Carbonate content	0.00 0.97
Glencoe clay loam---	5	Good		Poor Depth to saturated zone Low strength Shrink-swell	0.00 0.00 0.93	Poor Depth to saturated zone	0.00
L125A: Hanlon, rarely flooded-----	60	Good		Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Coland, occasionally flooded-----	25	Fair Too clayey	0.98	Poor Depth to saturated zone Shrink-swell	0.00 0.92	Poor Depth to saturated zone Too clayey	0.00 0.98
Minneopa, rarely flooded-----	15	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.93	Fair Depth to saturated zone	0.88	Poor Too sandy Rock fragments Depth to saturated zone	0.00 0.68 0.88
L126A: Coland, occasionally flooded-----	80	Fair Too clayey	0.98	Poor Depth to saturated zone Shrink-swell	0.00 0.92	Poor Depth to saturated zone Too clayey	0.00 0.98

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L126A: Minneopa, occasionally flooded-----	10	Poor Too sandy Low content of organic matter Droughty	0.00 0.12 0.93	Fair Depth to saturated zone	0.88	Poor Too sandy Rock fragments Depth to saturated zone	0.00 0.68 0.88
Havelock, occasionally flooded-----	5	Fair Low content of organic matter Carbonate content Too clayey	0.12 0.97 0.98	Poor Depth to saturated zone Shrink-swell	0.00 0.86	Poor Depth to saturated zone Carbonate content Too clayey	0.00 0.97 0.98
Spillville, occasionally flooded-----	5	Good		Fair Depth to saturated zone Shrink-swell	0.12 0.94	Fair Depth to saturated zone	0.12
L127A: Coland, frequently flooded-----	80	Good		Poor Depth to saturated zone Shrink-swell	0.00 0.91	Poor Depth to saturated zone	0.00
Minneopa, occasionally flooded-----	10	Fair Low content of organic matter Droughty	0.12 0.98	Fair Depth to saturated zone	0.88	Fair Depth to saturated zone	0.88
Havelock, frequently flooded-----	5	Fair Carbonate content	0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.73	Poor Depth to saturated zone Carbonate content	0.00 0.97
Spillville, occasionally flooded-----	5	Good		Fair Depth to saturated zone Shrink-swell	0.12 0.94	Fair Depth to saturated zone	0.12
L128A: Mazaska-----	60	Poor Too clayey Low content of organic matter Too acid Carbonate content	0.00 0.12 0.68 0.97	Poor Depth to saturated zone Shrink-swell	0.00 0.56	Poor Depth to saturated zone Too clayey	0.00 0.00

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L128A: Rolfe-----	30	Poor Too clayey Low content of organic matter Too acid Water erosion	 0.00 0.50 0.95 0.99	Poor Depth to saturated zone Shrink-swell	 0.00 0.87	Poor Depth to saturated zone Too clayey	 0.00 0.00
Lerdal-----	10	Poor Too clayey Low content of organic matter Too acid Carbonate content Water erosion	 0.00 0.12 0.54 0.97 0.99	Fair Depth to saturated zone Shrink-swell	 0.22 0.63	Poor Too clayey Depth to saturated zone Too acid	 0.00 0.22 0.98
L129B: Terril-----	90	Good		Good		Good	
Delft-----	5	Good		Poor Depth to saturated zone Shrink-swell	 0.00 0.99	Poor Depth to saturated zone	 0.00
Hamel-----	5	Fair Low content of organic matter	 0.12	Poor Depth to saturated zone Shrink-swell	 0.00 0.99	Poor Depth to saturated zone	 0.00
L130A: Okobojo mucky silty clay loam-----	75	Poor Too clayey	 0.00	Poor Depth to saturated zone Shrink-swell	 0.00 0.16	Poor Depth to saturated zone Too clayey	 0.00 0.00
Okobojo silty clay loam-----	15	Fair Too clayey	 0.05	Poor Depth to saturated zone Shrink-swell	 0.00 0.12	Poor Depth to saturated zone Too clayey	 0.00 0.05
Brownnton-----	5	Fair Too clayey	 0.12	Poor Depth to saturated zone Shrink-swell	 0.00 0.68	Poor Depth to saturated zone Too clayey	 0.00 0.12
Spicer-----	5	Fair Carbonate content Water erosion	 0.97 0.99	Poor Depth to saturated zone Shrink-swell	 0.00 0.99	Poor Depth to saturated zone Carbonate content	 0.00 0.97
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	

Table 12b.--Construction Materials--Continued

Map symbol and component name	Pct. of map unit	Potential as source of reclamation material	Potential as source of roadfill	Potential as source of topsoil			
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
W: Water-----	100	Not rated		Not rated		Not rated	

Table 13.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
GP:							
Pits, gravel-----	80	Not rated		Not rated		Not rated	
Udipsamments-----	20	Not rated		Not rated		Not rated	
L5A:							
Delft, overwash----	50	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.39	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Delft-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
L13A:							
Klossner, drained---	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.48	Somewhat limited Cutbanks cave	0.10
Mineral soil, drained-----	15	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Houghton, drained---	5	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
L14A:							
Houghton, drained---	80	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L14A: Klossner, drained---	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.48	Somewhat limited Cutbanks cave	0.10
Mineral soil, drained-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L15A: Klossner, ponded----	30	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.60	Somewhat limited Cutbanks cave	0.10
Okoboji, ponded-----	30	Somewhat limited Seepage	0.05	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.88	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe, ponded-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.16	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Houghton, ponded----	10	Very limited Seepage	1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
L16A: Muskego, ponded-----	30	Very limited Seepage	1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Blue Earth, ponded--	30	Somewhat limited Seepage	0.72	Very limited Content of organic matter Ponding Depth to saturated zone Piping	1.00 1.00 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L16A: Houghton, ponded----	30	Very limited Seepage	1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Klossner, ponded----	10	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.60	Somewhat limited Cutbanks cave	0.10
L26B: Shorewood-----	90	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.24 0.10
Good Thunder-----	5	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.18	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
Minnetonka-----	5	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.43 0.10
L36A: Hamel, overwash----	50	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Hamel-----	43	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Glencoe-----	2	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L40B: Angus-----	45	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.24 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Kilkenny-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.24 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L40B:							
Lerdal-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Mazaska-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L41C2:							
Lester, eroded-----	45	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Kilkenny, eroded----	40	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Hard to pack	0.86 0.11	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Derrynane-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L41D2:							
Lester, eroded-----	45	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Kilkenny, eroded----	35	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Depth to saturated zone Hard to pack	0.86 0.11	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Derrynane-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Ridgeton-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
L41E:							
Lester-----	45	Somewhat limited Seepage Slope	0.72 0.18	Somewhat limited Piping	0.24	Very limited Deep to water	1.00
Kilkenny-----	40	Somewhat limited Seepage Slope	0.70 0.18	Somewhat limited Depth to saturated zone	0.86	Very limited Deep to water	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L41E:							
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.44 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Derrynane-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Ridgeton-----	5	Somewhat limited Seepage Slope	0.72 0.02	Somewhat limited Piping	0.39	Very limited Deep to water	1.00
L48A:							
Derrynane, overwash	50	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Derrynane-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
L49A:							
Klossner, surface drained-----	65	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.60	Somewhat limited Cutbanks cave	0.10
Klossner, drained---	20	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.48	Somewhat limited Cutbanks cave	0.10
Mineral soil, drained-----	15	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L50A: Houghton, surface drained-----	40	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Muskego, surface drained-----	40	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Klossner, drained---	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.48	Somewhat limited Cutbanks cave	0.10
Mineral soil, drained-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Ponding Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L51C2: Gladek, eroded-----	80	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.65	Very limited Deep to water	1.00
Barrington-----	10	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.87 0.79	Very limited Cutbanks cave Slow refill Deep to water	1.00 0.30 0.06
Lester, eroded-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Madelia-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.34	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L56A: Muskego, frequently flooded-----	45	Very limited Seepage	1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L56A: Klossner, frequently flooded-----	45	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.60	Somewhat limited Cutbanks cave	0.10
Suckercreek, frequently flooded	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.62	Very limited Cutbanks cave	1.00
L57A: Medo, drained-----	80	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.43	Very limited Cutbanks cave	1.00
Mineral soil, drained-----	15	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.09	Very limited Cutbanks cave	1.00
Houghton, drained---	5	Very limited Seepage	1.00	Very limited Content of organic matter Ponding Depth to saturated zone	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
L63A: Klossner-----	85	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.01	Somewhat limited Cutbanks cave	0.10
Lura-----	10	Somewhat limited Seepage	0.01	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.81	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
Brownnton-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L64A: Tadkee-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L64A: Tadkee, depressional	36	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage Piping	1.00 1.00 1.00 0.92	Very limited Cutbanks cave	1.00
Better drained soil	8	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Piping Seepage	0.87 0.85 0.22	Very limited Cutbanks cave Slow refill Deep to water	1.00 0.30 0.06
Granby-----	4	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.62	Very limited Cutbanks cave	1.00
Less sandy soil----	2	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.32	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L73A: Blue Earth-----	80	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping Content of organic matter	1.00 1.00 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Belleville-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.85	Very limited Cutbanks cave	1.00
Canisteeo-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.62	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L74A: Estherville-----	87	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Hawick-----	10	Very limited Seepage	1.00	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Biscay-----	3	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.91	Very limited Cutbanks cave	1.00
L75B: Barrington-----	85	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.87 0.79	Very limited Cutbanks cave Slow refill Deep to water	1.00 0.30 0.06

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L75B:							
Gladek-----	10	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.65	Very limited Deep to water	1.00
Madelia-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.34	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L76B:							
Dickinson-----	80	Very limited Seepage	1.00	Somewhat limited Seepage	0.62	Very limited Deep to water	1.00
Litchfield-----	13	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.57	Very limited Cutbanks cave	1.00
Darfur-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00
Clarion-----	2	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
L77A:							
Brownston-----	75	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Marna-----	15	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Lura-----	10	Somewhat limited Seepage	0.01	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.81	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
L78A:							
Canistee-----	65	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Crippin-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.38	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe-----	10	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L78A: Canisteo, depressional-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.23	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Harps-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.24	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Webster-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L79B: Clarion-----	65	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Clarion, eroded-----	25	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.86 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Nicollet-----	8	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Webster-----	2	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L80C2: Lester, eroded-----	75	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Hamel-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Reedslake-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Storden, eroded-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.62	Very limited Deep to water	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L80D2: Lester, eroded-----	75	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Ridgeton-----	10	Somewhat limited Seepage Slope	0.72 0.01	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Storden, eroded-----	8	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Piping	0.62	Very limited Deep to water	1.00
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
Hamel-----	2	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L81A: Cordova-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Le Sueur-----	10	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Rolfe-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.03	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L82A: Marna-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Barbert-----	10	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.07	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Guckeen-----	5	Somewhat limited Seepage	0.70	Somewhat limited Depth to saturated zone Piping	0.87 0.10	Somewhat limited Slow refill Cutbanks cave Deep to water	0.30 0.10 0.06
L83A: Webster-----	65	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L83A: Glencoe-----	15	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Canistee-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.61	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Nicollet-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L84A: Glencoe-----	80	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Very poorly drained muck-----	10	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.50	Somewhat limited Cutbanks cave	0.10
Canistee-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Harps-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.24	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L85A: Nicollet-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Clarion-----	10	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Webster-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L86A: Madelia-----	90	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.34	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Okobojo-----	5	Somewhat limited Seepage	0.05	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.72	Somewhat limited Slow refill Cutbanks cave	0.95 0.10
Spicer-----	3	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Kingston-----	2	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.83	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L87A: Kingston-----	85	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.83	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Truman-----	10	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.98 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Madelia-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.34	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L88A: Lura-----	85	Somewhat limited Seepage	0.01	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.81	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
Brownton-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Organic soil-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.19	Somewhat limited Cutbanks cave	0.10
L89A: Guckeen-----	82	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L89A: Marna-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Clarion clay loam---	8	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.73 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
L90A: Le Sueur-----	75	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Cordova-----	13	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Reedslake-----	12	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
L91A: Mazaska-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Lerdal-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Rolfe-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.03	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L92A: Darfur-----	78	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00
Fieldon-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00
Litchfield-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.57	Very limited Cutbanks cave	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L92A: Webster-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Dassel-----	2	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
L93A: Muskego-----	82	Not limited		Very limited Content of organic matter Ponding Depth to saturated zone Piping	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Blue Earth-----	10	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping Content of organic matter	1.00 1.00 1.00 1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Mineral soil, drained-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Belleville-----	3	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.80	Very limited Cutbanks cave	1.00
L94A: Lowlein-----	75	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone	1.00 0.87	Very limited Cutbanks cave Deep to water	1.00 0.06
Linder-----	15	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.17	Very limited Cutbanks cave	1.00
Dickinson-----	8	Very limited Seepage	1.00	Somewhat limited Seepage	0.62	Very limited Deep to water	1.00
Darfur-----	2	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L95E:							
Hawick-----	80	Very limited Seepage Slope	1.00 0.10	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Estherville-----	10	Very limited Seepage Slope	1.00 0.03	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Tomall-----	10	Very limited Seepage	1.00	Somewhat limited Seepage	0.22	Very limited Cutbanks cave Deep to water	1.00 0.81
L96B:							
Estherville-----	55	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Hawick-----	35	Very limited Seepage	1.00	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Tomall-----	8	Very limited Seepage	1.00	Somewhat limited Seepage	0.22	Very limited Cutbanks cave Deep to water	1.00 0.81
Biscay-----	2	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.91	Very limited Cutbanks cave	1.00
L97C:							
Hawick-----	60	Very limited Seepage	1.00	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Estherville-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Tomall-----	10	Very limited Seepage	1.00	Somewhat limited Seepage	0.22	Very limited Cutbanks cave Deep to water	1.00 0.81
L98A:							
Crippin-----	50	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.38	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Nicollet-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Canisteo-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Clarion-----	5	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L99B:							
Clarion-----	62	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Swanlake-----	25	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.32 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Nicollet-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Webster-----	3	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L100B:							
Clarion-----	45	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Estherville-----	35	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Lowlein-----	5	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone Seepage	1.00 0.87 0.09	Very limited Cutbanks cave Deep to water	1.00 0.06
Nicollet-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Swanlake-----	5	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.32 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Webster-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.19	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L101C2:							
Omsrud, eroded-----	40	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.34	Very limited Deep to water	1.00
Hawick-----	30	Very limited Seepage	1.00	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Storden, eroded-----	20	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L101C2: Delft-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
L101D2: Omsrud, eroded-----	40	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.34	Very limited Deep to water	1.00
Hawick-----	25	Very limited Seepage Slope	1.00 0.03	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Storden, eroded-----	20	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Ridgeton-----	6	Somewhat limited Seepage Slope	0.72 0.01	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Delft-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Terril-----	4	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
L102C2: Omsrud, eroded-----	45	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.34	Very limited Deep to water	1.00
Storden, eroded-----	25	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Omsrud-----	15	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.35	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Delft-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L102D2:							
Omsrud, eroded-----	45	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.34	Very limited Deep to water	1.00
Storden, eroded-----	20	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Omsrud-----	15	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.35	Very limited Deep to water	1.00
Ridgeton-----	8	Somewhat limited Seepage Slope	0.72 0.01	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Delft-----	6	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Terril-----	6	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
L103A:							
Fieldon-----	50	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00
Canisteo-----	35	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Darfur-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.11	Very limited Cutbanks cave	1.00
Glencoe-----	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L105C2:							
Lester, eroded-----	45	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Hawick-----	35	Very limited Seepage	1.00	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L105C2: Hamel-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Storden, eroded----	5	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
L105D2: Lester, eroded-----	45	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Hawick-----	35	Very limited Seepage Slope	1.00 0.03	Somewhat limited Seepage	0.93	Very limited Deep to water	1.00
Ridgeton-----	8	Somewhat limited Seepage Slope	0.72 0.01	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Hamel-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Storden, eroded----	5	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Terril-----	2	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
L106C2: Lester, eroded-----	62	Somewhat limited Seepage	0.72	Somewhat limited Piping	0.23	Very limited Deep to water	1.00
Storden, eroded----	20	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Hamel-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Reedslake-----	3	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
L106D2: Lester, eroded-----	62	Somewhat limited Seepage Slope	0.72 0.03	Somewhat limited Piping	0.23	Very limited Deep to water	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L106D2: Storden, eroded-----	20	Somewhat limited Seepage Slope	0.70 0.03	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Ridgeton-----	10	Somewhat limited Seepage Slope	0.72 0.01	Somewhat limited Piping	0.42	Very limited Deep to water	1.00
Terril-----	5	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.45	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
Hamel-----	3	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L107A: Canisteo-----	50	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe-----	35	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Harps-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.24	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Canisteo, depressional-----	3	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.23	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Crippin-----	2	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.38	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L108A: Cordova-----	65	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Rolfe-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.03	Somewhat limited Slow refill Cutbanks cave	0.28 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L108A: Le Sueur-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L109A: Marna-----	65	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Barbert-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.07	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Guckeen-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L110E: Lester-----	50	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.24	Very limited Deep to water	1.00
Ridgeton-----	30	Somewhat limited Seepage Slope	0.72 0.06	Somewhat limited Piping	0.39	Very limited Deep to water	1.00
Cokato-----	10	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.29	Very limited Deep to water	1.00
Belview-----	6	Somewhat limited Seepage Slope	0.70 0.15	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Hamel-----	2	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Terril-----	2	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.44 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
L110F: Lester-----	55	Somewhat limited Seepage Slope	0.72 0.72	Somewhat limited Piping	0.25	Very limited Deep to water	1.00
Ridgeton-----	30	Somewhat limited Seepage Slope	0.72 0.15	Somewhat limited Piping	0.39	Very limited Deep to water	1.00
Cokato-----	8	Somewhat limited Seepage Slope	0.72 0.50	Somewhat limited Piping	0.29	Very limited Deep to water	1.00

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L110F: Belview-----	4	Somewhat limited Slope Seepage	0.72 0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
Terril-----	2	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.44 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Hamel-----	1	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L111A: Nicollet-----	85	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.16	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Clarion-----	10	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.79 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Webster-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.11	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L112A: Webster-----	85	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.11	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe-----	10	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Nicollet-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.16	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L113B: Reedslake-----	75	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Le Sueur-----	10	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L113B: Reedslake, eroded---	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Cordova-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L114A: Hanlon, rarely flooded-----	85	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.87 0.08	Very limited Cutbanks cave Deep to water	1.00 0.06
Coland, occasionally flooded-----	10	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 0.09 0.03	Somewhat limited Cutbanks cave	0.10
Minneopa, rarely flooded-----	5	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.87 0.52	Very limited Cutbanks cave Deep to water	1.00 0.06
L115A: Brownton-----	55	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Lura-----	35	Somewhat limited Seepage	0.01	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.81	Somewhat limited Slow refill Cutbanks cave	0.99 0.10
Marna-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L116A: Le Sueur-----	45	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Lerdal-----	40	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Mazaska-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L116A: Kilkenny-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Deep to water Cutbanks cave	0.30 0.24 0.10
L117C2: Omsrud, eroded-----	65	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.34	Very limited Deep to water	1.00
Omsrud-----	15	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.35	Very limited Deep to water	1.00
Terril-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Delft-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Storden, eroded-----	5	Somewhat limited Seepage	0.70	Somewhat limited Piping	0.32	Very limited Deep to water	1.00
L118A: Rushriver, frequently flooded	85	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.08	Very limited Cutbanks cave	1.00
Houghton, frequently flooded-----	5	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone	1.00 1.00	Somewhat limited Cutbanks cave	0.10
Klossner, frequently flooded-----	5	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping	1.00 1.00 0.62	Somewhat limited Cutbanks cave	0.10
Medo, frequently flooded-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.95	Very limited Cutbanks cave	1.00
L119B: Angus-----	80	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.24 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L119B: Angus, eroded-----	10	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.19 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Cordova-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Le Sueur-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L120A: Good Thunder-----	80	Somewhat limited Seepage	0.72	Somewhat limited Depth to saturated zone Piping	0.87 0.18	Somewhat limited Slow refill Cutbanks cave Deep to water	0.28 0.10 0.06
Ocheyedan-----	10	Somewhat limited Seepage	0.70	Very limited Piping Depth to saturated zone	1.00 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Minnetonka-----	10	Somewhat limited Seepage	0.57	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.43 0.10
L121B: Clarion-----	80	Somewhat limited Seepage	0.70	Somewhat limited Piping Depth to saturated zone	0.73 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Guckeen-----	15	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.10	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Marna-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L122B: Reedslake-----	55	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.27 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.30 0.10
Estherville-----	25	Very limited Seepage	1.00	Somewhat limited Seepage	0.98	Very limited Deep to water	1.00
Le Sueur-----	10	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.15	Somewhat limited Slow refill Cutbanks cave	0.28 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L122B: Cordova-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.02	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Lowlein-----	5	Very limited Seepage	1.00	Very limited Piping Depth to saturated zone Seepage	1.00 0.87 0.09	Very limited Cutbanks cave Deep to water	1.00 0.06
L123A: Belleville-----	85	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.85	Very limited Cutbanks cave	1.00
Granby-----	15	Very limited Seepage	1.00	Very limited Ponding Depth to saturated zone Seepage	1.00 1.00 0.97	Very limited Cutbanks cave	1.00
L124A: Glencoe mucky clay loam-----	85	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.43	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Canisteo-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.29	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Glencoe clay loam---	5	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.45	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L125A: Hanlon, rarely flooded-----	60	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.87 0.08	Very limited Cutbanks cave Deep to water	1.00 0.06
Coland, occasionally flooded-----	25	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 0.09 0.03	Somewhat limited Cutbanks cave	0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L125A: Minneopa, rarely flooded-----	15	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.87 0.52	Very limited Cutbanks cave Deep to water	1.00 0.06
L126A: Coland, occasionally flooded-----	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage Piping	1.00 0.09 0.03	Somewhat limited Cutbanks cave	0.10
Minneopa, occasionally flooded-----	10	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.87 0.52	Very limited Cutbanks cave Deep to water	1.00 0.06
Havelock, occasionally flooded-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Seepage	1.00 0.12 0.01	Somewhat limited Cutbanks cave	0.10
Spillville, occasionally flooded-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.66	Somewhat limited Cutbanks cave	0.10
L127A: Coland, frequently flooded-----	80	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Seepage	1.00 0.25 0.09	Somewhat limited Cutbanks cave	0.10
Minneopa, occasionally flooded-----	10	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.99 0.87	Very limited Cutbanks cave Deep to water	1.00 0.06
Havelock, frequently flooded-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Seepage	1.00 0.02 0.01	Somewhat limited Cutbanks cave	0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
L127A: Spillville, occasionally flooded-----	5	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping	1.00 0.66	Somewhat limited Cutbanks cave	0.10
L128A: Mazaska-----	60	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.01	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Rolfe-----	30	Somewhat limited Seepage	0.70	Very limited Ponding Depth to saturated zone Piping	1.00 1.00 0.03	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Lerdal-----	10	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
L129B: Terril-----	90	Somewhat limited Seepage	0.72	Somewhat limited Piping Depth to saturated zone	0.45 0.05	Somewhat limited Deep to water Slow refill Cutbanks cave	0.60 0.28 0.10
Delft-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.41	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Hamel-----	5	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
L130A: Okobojo mucky silty clay loam-----	75	Somewhat limited Seepage	0.04	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.66	Somewhat limited Slow refill Cutbanks cave	0.28 0.10
Okobojo silty clay loam-----	15	Somewhat limited Seepage	0.05	Very limited Ponding Depth to saturated zone Hard to pack	1.00 1.00 0.72	Somewhat limited Slow refill Cutbanks cave	0.95 0.10
Brownton-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone	1.00	Somewhat limited Slow refill Cutbanks cave	0.30 0.10
Spicer-----	5	Somewhat limited Seepage	0.70	Very limited Depth to saturated zone Piping	1.00 0.50	Somewhat limited Slow refill Cutbanks cave	0.30 0.10

Table 13.--Water Management--Continued

Map symbol and component name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
M-W: Water, miscellaneous	100	Not rated		Not rated		Not rated	
U3B: Udorthents (cut and fill land)-----	100	Not rated		Not rated		Not rated	
W: Water-----	100	Not rated		Not rated		Not rated	

Soil Properties

Data relating to soil properties are collected during the course of the soil survey. The data and the estimates of soil and water features, listed in tables, are explained on the following pages.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine grain-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties shown in the tables include the range of grain-size distribution and Atterberg limits, the engineering classification, and the physical and chemical properties of the major horizons of each soil. Pertinent soil and water features also are given.

Engineering Index Properties

Table 14 gives estimates of the engineering classification and of the range of index properties for the major horizons of each soil. Most soils have horizons of contrasting properties within the upper 5 or 6 feet.

Depth to the upper and lower boundaries of each horizon is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is as much as 15 percent, an

appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2001) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2000).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to grain-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, SP-SM.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of grain-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3

inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of grain-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is omitted in the table.

Physical and Chemical Properties

Tables 15 and 16 show estimates of some characteristics and features that affect soil behavior. These estimates are given for the major horizons of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each horizon is indicated.

In table 15, *clay* as a soil separate, or component, consists of mineral soil particles that are less than 0.002 millimeter in diameter. The estimated clay content of each major soil horizon is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay greatly affect the fertility and physical condition of the soil. They determine the ability of the soil to adsorb cations and to retain moisture. They influence linear extensibility, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earth-moving operations.

Moist bulk density is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $\frac{1}{3}$ -bar moisture tension. Weight is determined after drying the soil at 105 degrees C. In table 15, the estimated moist bulk density of each major soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and

roots. A bulk density of more than 1.6 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second ($\mu m/sec$), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each major soil horizon. The capacity varies, depending on soil properties that affect the retention of water and the depth of the root zone. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility percent is the linear expression of the volume difference of natural soil fabric at $\frac{1}{3}$ -bar or $\frac{1}{10}$ -bar water content and oven dryness. The volume change is reported as percent change for the whole soil. Volume change occurs mainly because of the interaction of clay minerals with water and varies with the amount and type of clay minerals in the soil. The size of the load on the soil and the magnitude of the change in soil moisture content influence the amount of swelling of soils in place. Laboratory measurements of swelling of undisturbed clods were made for many soils. For others, swelling was estimated on the basis of the kind and amount of clay minerals in the soil and on measurements of similar soils.

Linear extensibility of 3 percent or more can cause damage to buildings, roads, and other structures. Special design is often needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In table 15, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained or increased by returning crop residue to

the soil. Organic matter affects the available water capacity, infiltration rate, and tilth. It is a source of nitrogen and other nutrients for crops.

Erosion factors are shown in table 15 as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.
2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.
3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.
- 4L. Calcareous loams, silt loams, clay loams, and silty clay loams.
4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.
5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.
6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.
7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of rock fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

In table 16, *cation-exchange capacity* is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Water Features

Soil moisture status is an estimate of the fluctuating water content in a soil. It greatly influences vegetation type and plant growth; physical properties of soils, such as permeability, workability, strength, linear extensibility, and frost action; and chemical interactions and transport. Many other properties, qualities, and interpretations also are affected. Soil moisture status is important in the classification of soils, wetland, and habitat.

Table 17 gives estimates of soil moisture for each component of a map unit at various depths for every month of the year. The depths displayed are representative values that are indicative of conditions that occur most of the time. *Dry* indicates a moisture condition under which most plants (especially crops) cannot extract water for growth. *Moist* indicates a moisture condition under which soil water is most readily available for plant growth. *Wet* indicates a condition under which water will stand in an unlined hole or at least a condition under which the soil is too wet for the growth of most agricultural species. A moisture status of 4.0-6.7 (wet) indicates that most of the time the component is saturated at some depth between 4.0 feet and 6.7 feet during the month designated. In some years the soil may be saturated at a depth of less than 4.0 feet or more than 6.7 feet; however, field observations indicate that the soil will be saturated between these depths in most years. In the summer, the soil may show the effects of drying plus intermittent rains that result in a moist or wet layer over a dry layer that gets moist or wet again.

In table 17, *hydrologic soil groups* are groups of soils that, when saturated, have the same runoff potential under similar storm and ground cover conditions. The soil properties that affect the runoff potential are those that influence the minimum rate of infiltration in a bare soil after prolonged wetting and when the soil is not frozen. These properties include the depth to a zone in which the soil moisture status is wet, the infiltration rate, permeability after prolonged wetting, and the depth to a very slowly permeable horizon or horizons. The influences of ground cover and slope are treated independently and are not taken into account in hydrologic soil groups.

In the definitions of the hydrologic soil groups, the infiltration rate is the rate at which water enters the soil at the surface and is controlled by surface conditions. The transmission rate is the rate at which water moves through the soil and is controlled by properties of the soil horizons.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of very deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have a moderately fine to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when

thoroughly wet. These consist chiefly of soils having a horizon or horizons that impede the downward movement of water or soils that have a moderately fine or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clayey soils that have a high linear extensibility; soils that have a zone, high in the profile, in which the soil moisture status is wet on a permanent basis; soils that have a claypan or clay horizon or horizons at or near the surface; and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Flooding, the temporary covering of the soil surface by flowing water, is caused by overflow from streams or by runoff from adjacent slopes. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in marshes and swamps or in closed depressions is considered to be ponding.

Table 18 gives estimates of the frequency and duration of flooding for every month of the year. Flooding frequency is the annual probability of a flood event expressed as a class. *None* indicates no reasonable possibility of flooding (the chance of flooding is nearly 0 percent in any year, or flooding is likely less than once in 500 years). *Very rare* indicates that flooding is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year, or flooding is likely less than once in 100 years but more than once in 500 years). *Rare* indicates that flooding is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year, or flooding is likely 1 to 5 times in 100 years). *Occasional* indicates that flooding occurs infrequently under usual weather conditions (the chance of flooding is 5 to 50 percent in any year, or flooding is likely 5 to 50 times in 100 years). *Frequent* indicates that flooding is likely to occur often under usual weather conditions (the chance of flooding is more than 50 percent in any year, or flooding is likely more than 50 times in 100 years; but the chance of flooding is less than 50 percent in all months in any year). *Very frequent* indicates that flooding is likely to occur very often under usual weather conditions (the chance of flooding is more than 50 percent in all months of any year).

Flooding duration is the average duration of

inundation per flood occurrence expressed as a class. *Extremely brief* is 0.1 hour to 4.0 hours; *very brief* is 4 to 48 hours; *brief* is 2 to 7 days; *long* is 7 to 30 days; and *very long* is more than 30 days. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and level of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation.

Table 19 gives estimates of the frequency, duration, and depth of ponding for every month of the year. The depths displayed are representative values that are indicative of conditions that occur most of the time.

Ponding frequency is the number of times ponding occurs over a period of time. *None* indicates no reasonable possibility of ponding (the chance of ponding is nearly 0 percent in any year). *Rare* indicates that ponding is unlikely but possible under unusual weather conditions (the chance of ponding ranges from nearly 0 percent to 5 percent in any year, or ponding is likely 0 to 5 times in 100 years). *Occasional* indicates that ponding is expected infrequently under usual weather conditions (the chance of ponding ranges from 5 to 50 percent in any one year, or ponding is likely 5 to 50 times in 100 years). *Frequent* indicates that ponding is likely to occur under usual weather conditions (the chance of ponding is more than 50 percent in any year, or ponding is likely more than 50 times in 100 years).

Ponding duration is the average length of time of the ponding occurrence. It is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 to 30 days), and *very long* (more than 30 days).

Soil Features

Table 20 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

Subsidence is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to a zone in which the soil moisture status is wet are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a saturated zone high in the profile during the winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Table 14.--Engineering Index Properties

(Absence of an entry indicates that the data were not estimated)

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches						
								4	10	40	200		
		In				Pct	Pct					Pct	
GP: Pits, gravel.													
Udipsamments.													
L5A: Delft, overwash	50	0-12	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		12-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-47	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		47-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	40	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	5	0-10	Clay loam	ML, CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	OL, ML, CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	ML, CL	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	5	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL-ML, CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L13A: Klossner, drained-----	80	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-36	Mucky silt loam, mucky silty clay loam, silt loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		36-48	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		48-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200	Pct	
		In				Pct	Pct					Pct	
L13A: Mineral soil, drained-----	15	0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Sandy loam, clay loam, silty clay loam	SC, CL	A-4, A-6	0	0	90-100	85-100	60-95	45-90	30-40	5-20
		45-80	Sandy loam, clay loam, loam	SM, SC, CL	A-4, A-6	0-1	0-2	85-100	75-95	60-90	40-90	25-40	3-20
Houghton, drained-----	5	0-10	Muck	PT	A-8	0	0	---	---	---	---	---	---
		10-80	Muck	PT	A-8	0	0	---	---	---	---	---	---
L14A: Houghton, drained-----	80	0-10	Muck	PT	A-8	0	0	---	---	---	---	---	---
		10-80	Muck	PT	A-8	0	0	---	---	---	---	---	---
Klossner, drained-----	10	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-36	Mucky silt loam, mucky silty clay loam, silt loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		36-48	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		48-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L14A: Mineral soil, drained-----	10	0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Sandy loam, clay loam, silty clay loam	SC, CL	A-4, A-6	0	0	90-100	85-100	60-95	45-90	30-40	5-20
		45-80	Sandy loam, clay loam, loam	SM, SC, CL	A-4, A-6	0-1	0-2	85-100	75-95	60-90	40-90	25-40	3-20
L15A: Klossner, ponded	30	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-33	Silt loam, silty clay loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		33-40	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		40-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25
Okoboji, ponded	30	0-10	Mucky silty clay loam	MH	A-7	0	0	100	100	95-100	90-95	60-90	10-30
		10-52	Silty clay loam, silty clay	CH	A-7	0	0	100	100	90-100	80-95	55-65	30-40
		52-60	Silty clay loam, silty clay	CH	A-7	0	0	95-100	95-100	90-100	80-95	55-65	30-40
Glencoe, ponded	30	0-42	Silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-55	10-25
		42-50	Loam, clay loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-25
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Houghton, ponded	10	0-80	Muck	PT	A-8	0	0	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L16A:													
Muskego, ponded	30	0-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
		9-36	Muck	PT	A-8	0	0	---	---	---	---	---	---
		36-60	Coprogenous earth	OL	A-5	0	0	95-100	95-100	85-100	75-96	40-50	2-8
Blue Earth, ponded-----	30	0-50	Silt loam	OL	A-5	0	0	95-100	95-100	85-95	80-95	41-50	2-8
		50-60	Silty clay loam, clay loam, silt loam	OL	A-5	0	0	95-100	80-100	80-95	80-95	41-50	2-8
Houghton, ponded	30	0-80	Muck	PT	A-8	0	0	---	---	---	---	---	---
Klossner, ponded	10	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-33	Silt loam, silty clay loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		33-40	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		40-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25
L26B:													
Shorewood-----	90	0-17	Silty clay loam	CL, ML	A-6, A-7	0	0	100	100	90-100	85-100	35-50	12-20
		17-39	Silty clay, silty clay loam	CH, MH	A-7	0	0	100	100	90-100	85-100	55-75	20-45
		39-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Good Thunder----	5	0-15	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	90-100	85-100	35-50	12-20
		15-32	Silty clay, silty clay loam	CH, MH	A-7	0	0	100	100	90-100	85-100	45-75	20-40
		32-80	Silt loam, silty clay loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	25-50	5-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L26B:													
Minnetonka-----	5	0-13	Silty clay loam	MH, CL	A-7	0	0	95-100	95-100	90-98	85-95	40-55	15-20
		13-35	Silty clay, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	90-98	85-95	40-65	15-35
		35-60	Silty clay loam, silt loam, clay loam	CL, ML, MH	A-6, A-7	0	0	95-100	85-100	75-100	60-95	30-55	10-25
L36A:													
Hamel, overwash	50	0-13	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		13-29	Loam, clay loam	ML, CL	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		29-50	Clay loam, loam, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	43	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	5	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	2	0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Loam, clay loam, silty clay loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		45-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L40B:													
Angus-----	45	0-8	Loam	CL	A-6	0	0-5	95-100	90-100	80-95	50-85	30-40	11-15
		8-35	Clay loam, loam	CL	A-6	0-1	0-5	95-100	90-100	80-95	55-75	35-40	15-20
		35-40	Loam, clay loam	CL	A-6	0-1	0-5	95-100	90-100	75-90	50-75	32-39	13-18
		40-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L40B:													
Kilkenny-----	40	0-11	Clay loam	ML, CL	A-6, A-7	0	0	95-100	95-100	80-95	70-85	35-50	10-25
		11-35	Clay loam, clay, silty clay loam	CH, MH	A-7	0	0	95-100	90-100	80-95	65-80	50-70	25-35
		35-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lerdal-----	10	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		8-12	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		12-41	Silty clay loam, clay loam	CL, ML, CH, MH	A-7	0	0	95-100	90-100	80-95	70-90	45-70	20-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Mazaska-----	5	0-15	Silty clay loam	CL, CH	A-6, A-7	0	0	95-100	95-100	85-100	70-95	35-55	12-28
		15-42	Clay, silty clay loam	CH, CL	A-7	0	0	90-100	85-100	75-95	60-90	40-65	15-35
		42-80	Loam, clay loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L41C2:													
Lester, eroded--	45	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Kilkenny, eroded	40	0-9	Clay loam	ML, CL	A-6, A-7	0	0	95-100	95-100	80-95	70-85	35-50	10-25
		9-53	Clay loam, clay, silty clay loam	CH, MH	A-7	0	0	95-100	90-100	80-95	65-80	50-70	25-35
		53-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Derrynane-----	5	0-19	Clay loam	CH, CL	A-7	0	0	100	95-100	80-90	75-90	46-56	25-33
		19-39	Silty clay, silty clay loam, silty clay loam, clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	95-100	85-95	70-90	40-65	20-35
		39-65	Clay loam	CL	A-7	0	0	95-100	95-100	85-95	70-90	43-50	22-28
		65-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L41D2: Lester, eroded--	45	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Kilkenny, eroded	35	0-9	Clay loam	ML, CL	A-6, A-7	0	0	95-100	95-100	80-95	70-85	35-50	10-25
		9-53	Clay loam, clay, silty clay loam	CH, MH	A-7	0	0	95-100	90-100	80-95	65-80	50-70	25-35
		53-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Derrynane-----	5	0-19	Clay loam	CH, CL	A-7	0	0	100	95-100	80-90	75-90	46-56	25-33
		19-39	Silty clay, silty clay loam, silty clay loam, clay loam, silty clay	CH, CL	A-6, A-7	0	0	100	95-100	85-95	70-90	40-65	20-35
		39-65	Clay loam	CL	A-7	0	0	95-100	95-100	85-95	70-90	43-50	22-28
		65-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	5	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL, CL-ML	A-6, A-7	0	0-3	95-100	90-100	70-90	60-80	25-45	5-20
		38-50	Clay loam, loam	CL-ML, CL	A-7, A-6	0	0-2	95-100	90-100	65-95	50-85	20-45	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L41E: Lester-----	45	0-5	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		5-34	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		34-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Kilkenny-----	40	0-7	Clay loam	ML, CL	A-6, A-7	0	0	95-100	95-100	80-95	70-85	35-50	10-25
		7-31	Clay loam, clay, silty clay loam	CH, MH	A-7	0	0	95-100	90-100	80-95	65-80	50-70	25-35
		31-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L41E:													
Terril-----	5	0-24	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		24-37	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		37-57	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Derrynane-----	5	0-20	Clay loam	CH, CL	A-7	0	0	100	95-100	80-90	75-90	46-56	25-33
		20-40	Silty clay, silty clay loam, silty clay loam, clay loam, silty clay	CH, CL	A-7, A-6	0	0	100	95-100	85-95	70-90	40-65	20-35
		40-54	Clay loam	CL	A-7	0	0	95-100	95-100	85-95	70-90	43-50	22-28
		54-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	5	0-32	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		32-40	Clay loam, loam	CL-ML, CL	A-7, A-6	0	0-2	95-100	90-100	65-95	50-85	20-45	5-20
		40-80	Clay loam, loam	CL	A-7, A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-45	12-20
L48A:													
Derrynane, overwash-----	50	0-16	Clay loam	CH, CL	A-6	0	0	100	95-100	80-90	75-90	40-55	25-33
		16-48	Silty clay, silty clay loam, clay loam	CH, CL	A-6, A-7	0	0	100	95-100	85-95	70-90	40-65	20-35
		48-67	Clay loam	CL	A-6	0	0	95-100	95-100	85-95	70-90	30-50	22-28
		67-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Derrynane-----	40	0-19	Clay loam	CH, CL	A-7	0	0	100	95-100	80-90	75-90	46-56	25-33
		19-39	Silty clay, silty clay loam, clay loam	CH, CL	A-7, A-6	0	0	100	95-100	85-95	70-90	40-65	20-35
		39-65	Clay loam	CL	A-7	0	0	95-100	95-100	85-95	70-90	43-50	22-28
		65-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	5	0-10	Clay loam	CL, ML	A-7, A-6	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L48A:	5												
Terril-----		0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L49A:	65												
Klossner, surface drained		0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-33	Silt loam, silty clay loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		33-40	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		40-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25
Klossner, drained-----	20												
		0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-36	Mucky silt loam, mucky silty clay loam, silt loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		36-48	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		48-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25
Mineral soil, drained-----	15												
		0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Sandy loam, clay loam, silty clay loam	SC, CL	A-4, A-6	0	0	90-100	85-100	60-95	45-90	30-40	5-20
		45-80	Sandy loam, clay loam, loam	SM, SC, CL	A-4, A-6	0-1	0-2	85-100	75-95	60-90	40-90	25-40	3-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L50A: Houghton, surface drained	40	0-80	Muck	PT	A-8	0	0	---	---	---	---	---	---
Muskego, surface drained-----	40	0-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
		9-36	Muck	PT	A-8	0	0	---	---	---	---	---	---
		36-60	Coprogenous earth	OL	A-5	0	0	95-100	95-100	85-100	75-96	40-50	2-8
Klossner, drained-----	10	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-36	Mucky silt loam, mucky silty clay loam, silt loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		36-48	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		48-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25
Mineral soil, drained-----	10	0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Sandy loam, clay loam, silty clay loam	SC, CL	A-4, A-6	0	0	90-100	85-100	60-95	45-90	30-40	5-20
		45-80	Sandy loam, clay loam, loam	SM, SC, CL	A-4, A-6	0-1	0-2	85-100	75-95	60-90	40-90	25-40	3-20
L51C2: Gladek, eroded--	80	0-10	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-95	25-40	8-20
		10-39	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	80-90	30-45	15-25
		39-80	Very fine sandy loam, silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	95-100	90-100	80-90	24-40	4-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L51C2: Barrington-----	10	0-15	Silt loam	CL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	8-18
		15-33	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-50	11-25
		33-60	Stratified loamy very fine sand to silt loam	SC-SM, SC, CL, CL-ML	A-4, A-6	0	0	95-100	80-100	75-100	36-90	15-30	5-15
Lester, eroded--	5	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Madelia-----	5	0-19	Silty clay loam	CL	A-6	0	0	100	100	100	90-100	40-50	10-25
		19-37	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	90-100	30-50	10-25
		37-60	Silt loam, silty clay loam	CL, ML	A-4, A-6, A-7	0	0	100	100	100	90-100	30-50	5-25
L56A: Muskego, frequently flooded-----	45	0-9	Muck	PT	A-8	0	0	---	---	---	---	---	---
		9-36	Muck	PT	A-8	0	0	---	---	---	---	---	---
		36-60	Coprogenous earth	OL	A-5	0	0	95-100	95-100	85-100	75-96	40-50	2-8
Klossner, frequently flooded-----	45	0-26	Muck	PT	A-8	0	0	---	---	---	---	---	---
		26-33	Silt loam, silty clay loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		33-40	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		40-80	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-95	55-80	30-55	10-25

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L56A: Suckercreek, frequently flooded-----	10	0-22	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	50-85	15-30	5-10
		22-80	Loam, sandy loam, loamy fine sand	SC, SM	A-2, A-4	0	0	95-100	85-100	65-90	20-70	0-30	NP-10
L57A: Medo, drained---	80	0-27	Muck	PT	A-8	---	---	---	---	---	---	---	---
		27-35	Sandy clay loam, mucky loam, mucky silt loam	CL, ML	A-6, A-7	0	0	85-100	75-100	55-95	45-85	35-50	7-22
		35-39	Sandy clay loam	SC, CL	A-6, A-7	0	0	85-100	75-100	55-95	45-85	30-65	8-16
		39-80	Sand, gravelly coarse sand, gravelly loamy coarse sand, fine sand	SP, SP-SM, SM	A-1, A-2, A-3, A-4	0-2	0-5	75-95	60-95	20-75	2-40	0-20	NP-4
Mineral soil, drained-----	15	0-23	Fine sandy loam	SM	A-4	0	0	100	95-100	70-85	40-50	0-30	NP-4
		23-31	Stratified loamy fine sand to fine sandy loam	SM	A-2, A-4	0	0	100	95-100	55-80	25-50	0-30	NP-4
		31-60	Stratified loamy sand to coarse sand	SM, SP-SM, SP	A-2	0	0	100	80-100	45-90	4-55	0-15	NP
Houghton, drained-----	5	0-10	Muck	PT	A-8	0	0	---	---	---	---	---	---
		10-80	Muck	PT	A-8	0	0	---	---	---	---	---	---
L63A: Klossner-----	85	0-25	Muck	PT	A-8	0	0	---	---	---	---	---	---
		25-40	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		40-80	Clay loam, silty clay loam	CL, CH	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L63A:	10	0-10	Silty clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
Lura-----		10-58	Silty clay, clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		58-72	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-75	15-45
Brownton-----	5	0-22	Silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-65	20-35
		22-38	Silty clay, clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-80	25-40
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L64A:	50	0-6	Loamy fine sand	SM, SP-SM	A-2	0	0	100	95-100	50-80	4-35	0-14	NP-4
Tadkee-----		6-34	Sand, fine sand, loamy sand	SW, SP, SP-SM	A-1, A-2, A-3	0	0	100	75-100	45-80	4-35	0-14	NP
		34-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Tadkee, depressional---	36	0-6	Mucky loamy fine sand	SP-SM, SM	A-2	0	0	100	95-100	50-80	4-35	0-14	NP-4
		6-27	Sand, fine sand, loamy sand	SW, SP, SP-SM	A-1, A-2, A-3	0	0	100	75-100	45-80	4-35	0-14	NP
		27-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Better drained soil-----	8	0-6	Loamy sand	SM	A-2	0	0-1	98-100	95-100	70-90	15-35	5-15	NP-2
		6-25	Sand, fine sand, loamy sand	SP-SM, SP	A-2	0	0-1	98-100	95-100	65-90	4-25	5-15	NP-2
		25-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Granby-----	4	0-12	Loamy fine sand	SM	A-2	0	0	100	100	50-80	15-35	0-14	NP
		12-24	Sand, loamy fine sand, loamy sand	SM, SP-SM	A-3, A-1, A-2	0	0	100	95-100	45-80	5-35	0-14	NP
		24-60	Coarse sand, fine sand, loamy fine sand	SP-SM, SM	A-1, A-2, A-3	0	0	100	95-100	45-80	5-35	0-14	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L64A:													
Less sandy soil	2	0-4	Loamy fine sand	SM, SP-SM	A-2	0	0	100	95-100	50-80	4-35	0-14	NP-4
		4-20	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		20-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L73A:													
Blue Earth-----	80	0-10	Mucky silty clay loam	OL, ML	A-5	0	0	95-100	95-100	85-95	80-95	41-50	2-8
		10-68	Mucky silty clay loam, clay loam, mucky silt loam	ML, OL	A-5	0	0	95-100	80-100	80-95	80-95	41-50	2-8
		68-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Belleville-----	10	0-11	Sandy loam	SC-SM, SM	A-4	0	0	100	95-100	60-90	35-50	0-25	NP-5
		11-27	Loamy sand, fine sand, sand	SC-SM, SM, SP-SM	A-1-b, A-2, A-3, A-4	0	0	90-100	80-100	40-85	5-45	0-25	NP-5
		27-48	Loam, clay loam, silty clay loam	CL	A-6	0-1	0-2	95-100	90-98	80-95	55-90	30-40	10-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Canistee-----	10	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL, ML	A-6	0	0-5	90-100	80-95	60-95	50-85	30-40	5-15
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L74A:													
Estherville-----	87	0-13	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		13-18	Sandy loam, loam, coarse sandy loam	SC-SM, SM, SC	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		18-23	Coarse sand, gravelly coarse sand, loamy coarse sand	SP-SM, SP, SM	A-2	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
		23-60	Coarse sand, gravelly coarse sand, loamy coarse sand	GP, SP-SM, SM, SP	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L74A: Hawick-----	10	0-7	Gravelly coarse sandy loam, sandy loam	SM, SP-SM	A-1, A-2, A-3	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Biscay-----	3	0-20	Loam	ML, CL	A-6, A-7	0	0	95-100	95-100	70-95	50-80	35-50	10-25
		20-28	Loam, clay loam, sandy clay loam	ML, CL	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
		28-36	Gravelly loam, sandy loam, gravelly sandy loam	SM, SC-SM, SC	A-4	0	0-5	95-100	70-95	50-80	35-50	15-30	2-10
		36-60	Gravelly coarse sand	SP, GP, SP-SM, GP-GM	A-1	0	0-5	45-95	35-95	20-45	2-10	---	NP
L75B: Barrington-----	85	0-15	Silt loam	CL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	8-18
		15-33	Silt loam	CL	A-6, A-7	0	0	100	100	95-100	80-95	35-50	11-25
		33-60	Stratified loamy very fine sand to silt loam	SC-SM, SC, CL, CL-ML	A-4, A-6	0	0	95-100	80-100	75-100	36-90	15-30	5-15
Gladek-----	10	0-10	Silt loam	CL	A-6, A-4	0	0	100	95-100	90-100	80-95	25-40	8-20
		10-39	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	95-100	90-100	80-90	30-45	15-25
		39-80	Very fine sandy loam, silt loam	CL, CL-ML	A-4, A-6	0	0	95-100	95-100	90-100	80-90	24-40	4-15
Madelia-----	5	0-19	Silty clay loam	CL	A-6	0	0	100	100	100	90-100	40-50	10-25
		19-37	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	90-100	30-50	10-25
		37-60	Silt loam, silty clay loam	CL, ML	A-4, A-6, A-7	0	0	100	100	100	90-100	30-50	5-25

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L76B: Dickinson-----	80	0-14	Fine sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	85-95	30-50	15-30	NP-10
		14-39	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	85-95	35-50	15-30	NP-10
		39-60	Sand, loamy fine sand, loamy sand	SM	A-2, A-3	0	0	100	100	70-90	5-20	0-14	NP
Litchfield-----	13	0-20	Loamy fine sand	SM	A-2	0	0	100	100	80-95	15-35	15-20	NP-4
		20-33	Fine sand	SW-SM	A-2	0	0	100	100	80-95	5-20	15-20	NP-4
		33-40	Very fine sandy loam	SC-SM, CL-ML	A-4	0	0	100	95-100	90-100	80-95	0-25	NP-5
		40-80	Loamy fine sand, loamy sand, sand	SM	A-2, A-3	0	0	100	100	70-95	5-30	15-20	NP-4
Darfur-----	5	0-9	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		9-19	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		19-31	Fine sandy loam, loam, loamy fine sand	SM	A-4	0	0	100	100	70-100	35-50	20-30	NP-5
		31-60	Stratified fine sand to loamy fine sand to fine sandy loam	SM	A-2, A-4	0	0	100	100	50-100	15-40	---	NP
Clarion-----	2	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L77A: Brownnton-----	75	0-22	Silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-65	20-35
		22-38	Silty clay, clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-80	25-40
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches						
								4	10	40	200		
		In				Pct	Pct					Pct	
L77A:													
Marna-----	15	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-7	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lura-----	10	0-10	Silty clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		10-58	Silty clay, clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		58-72	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-75	15-45
L78A:													
Canisteo-----	65	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Crippin-----	10	0-15	Loam	CL	A-6, A-7	0	0	95-100	95-100	80-90	60-80	30-45	10-20
		15-27	Loam, clay loam	CL	A-6	---	0-5	95-100	90-100	80-90	60-80	30-40	10-20
		27-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	10	0-10	Clay loam	CL, ML, OL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Canisteo, depressional---	5	0-17	Silty clay loam	CL, ML	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		17-30	Clay loam, loam, silty clay loam	ML, CL	A-6	---	0-5	95-100	90-100	85-95	65-85	35-50	15-20
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Harps-----	5	0-13	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	80-90	65-80	35-55	15-35
		13-30	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L78A: Webster-----	5	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L79B: Clarion-----	65	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Clarion, eroded	25	0-10	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		10-38	Loam, sandy loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Nicollet-----	8	0-17	Clay loam	CL, ML	A-7, A-6	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Webster-----	2	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L80C2: Lester, eroded--	75	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L80C2:													
Hamel-----	5	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Reedslake-----	5	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	5	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Loam, clay loam	CL	A-6	0	0-5	95-100	90-98	70-95	55-70	28-39	9-18
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L80D2:													
Lester, eroded--	75	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	10	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL, CL-ML	A-6, A-7	0	0-3	95-100	90-100	70-90	60-80	25-45	5-20
		38-50	Clay loam, loam	CL-ML, CL	A-7, A-6	0	0-2	95-100	90-100	65-95	50-85	20-45	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	8	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Loam, clay loam	CL	A-6	0	0-5	95-100	90-98	70-95	55-70	28-39	9-18
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	5	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	2	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L81A: Cordova-----	85	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Le Sueur-----	10	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Rolfe-----	5	0-12	Silt loam	OL, ML, CL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	5-15
		12-20	Silt loam, clay loam	ML, CL	A-6, A-4	0	0	100	95-100	90-100	75-95	30-40	5-35
		20-35	Silty clay	CH	A-7	0	0	100	95-100	90-100	90-100	50-65	25-35
		35-51	Clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	80-90	55-75	30-45	10-20
		51-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L82A: Marna-----	85	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-7	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Barbert-----	10	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	90-100	25-40	5-15
		7-17	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	90-100	25-40	5-15
		17-43	Clay, silty clay	CH, MH	A-7	0	0	100	100	90-100	90-100	50-80	20-50
		43-60	Silty clay loam, silt loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	90-100	25-50	5-20
Guckeen-----	5	0-15	Silty clay loam	CH	A-7	0	0	100	95-100	95-100	80-95	40-55	15-25
		15-24	Silty clay, silty clay loam, clay	CH	A-7	0	0	100	95-100	95-100	80-95	40-65	15-30
		24-30	Clay loam, loam	CL	A-6, A-7	---	0-2	90-100	90-98	85-95	60-75	30-50	10-25
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches						
								4	10	40	200		
		In				Pct	Pct					Pct	
L83A:													
Webster-----	65	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	15	0-10	Clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Canisteo-----	10	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL, ML	A-6	0	0-5	90-100	80-95	60-95	50-85	30-40	5-15
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Nicollet-----	10	0-17	Clay loam	CL, ML	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L84A:													
Glencoe-----	80	0-10	Clay loam	CL, ML, OL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Very poorly drained muck---	10	0-12	Muck	PT	A-8	0	0	---	---	---	---	---	---
		12-29	Silty clay loam, clay loam, loam	ML, OL, CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		29-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L84A:													
Canisteo-----	5	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Harps-----	5	0-13	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	80-90	65-80	35-55	15-35
		13-30	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L85A:													
Nicollet-----	85	0-17	Clay loam	CL, ML	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Clarion-----	10	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Webster-----	5	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L86A:													
Madelia-----	90	0-19	Silty clay loam	CL	A-6	0	0	100	100	100	90-100	40-50	10-25
		19-37	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	90-100	30-50	10-25
		37-60	Silt loam, silty clay loam	CL, ML	A-4, A-6, A-7	0	0	100	100	100	90-100	30-50	5-25
Okoboji-----	5	0-26	Silty clay loam	CH	A-7	0	0	100	100	90-100	80-95	50-60	30-35
		26-42	Silty clay	CH	A-7	0	0	100	100	90-100	80-95	50-60	30-35
		42-60	Silty clay loam	CL	A-6	0	0	95-100	95-100	90-100	80-95	40-48	30-35

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L86A: Spicer-----	3	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
		16-40	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	35-50	10-25
		40-60	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-25
Kingston-----	2	0-16	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-100	30-40	10-20
		16-25	Silty clay loam, silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	25-50	6-20
		25-60	Silt loam, silty clay loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	85-100	25-50	5-20
L87A: Kingston-----	85	0-16	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-100	30-40	10-20
		16-25	Silty clay loam, silt loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	25-50	6-20
		25-60	Silt loam, silty clay loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	95-100	85-100	25-50	5-20
Truman-----	10	0-14	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	80-100	25-40	5-15
		14-36	Silt loam, silty clay loam	CL, CL-ML	A-4, A-6, A-7	0	0	100	100	95-100	80-100	25-45	5-20
		36-60	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	95-100	75-95	25-40	5-15
Madelia-----	5	0-19	Silty clay loam	CL	A-6	0	0	100	100	100	90-100	40-50	10-25
		19-37	Silty clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	90-100	30-50	10-25
		37-60	Silt loam, silty clay loam	CL, ML	A-4, A-6, A-7	0	0	100	100	100	90-100	30-50	5-25

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L88A:													
Lura-----	85	0-10	Silty clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		10-58	Silty clay, clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		58-72	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-75	15-45
Brownton-----	10	0-22	Silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-65	20-35
		22-38	Silty clay, clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-80	25-40
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Organic soil----	5	0-10	Muck	PT	A-8	0	0	---	---	---	---	---	---
		10-26	Mucky silty clay loam	MH	A-7	0	0	100	95-100	90-100	85-95	60-90	10-30
		26-48	Clay loam, silty clay loam	CH	A-6, A-7	0	0	95-100	90-100	80-100	60-90	35-65	20-30
		48-80	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-75	15-45
L89A:													
Guckeen-----	82	0-15	Silty clay loam	CH	A-7	0	0	100	95-100	95-100	80-95	40-55	15-25
		15-24	Silty clay, silty clay loam, clay	CH	A-7	0	0	100	95-100	95-100	80-95	40-65	15-30
		24-30	Clay loam, loam	CL	A-6, A-7	---	0-2	90-100	90-98	85-95	60-75	30-50	10-25
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Marna-----	10	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Clarion clay loam-----	8	0-13	Clay loam	CL-ML, CL	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		13-37	Clay loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		37-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L90A:													
Le Sueur-----	75	0-17	Clay loam	CL, ML	A-6, A-7	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Cordova-----	13	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Reedslake-----	12	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L91A:													
Mazaska-----	85	0-15	Silty clay loam	CL, CH	A-6, A-7	0	0	95-100	95-100	85-100	70-95	35-55	12-28
		15-42	Clay, silty clay loam	CH, CL	A-7	0	0	90-100	85-100	75-95	60-90	40-65	15-35
		42-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lerdal-----	10	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		8-12	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		12-41	Silty clay loam, clay loam	CL, ML, CH, MH	A-7	0	0	95-100	90-100	80-95	70-90	45-70	20-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Rolfe-----	5	0-12	Silt loam	CL, ML, OL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	5-15
		12-20	Silt loam, clay loam	ML, CL	A-6, A-4	0	0	100	95-100	90-100	75-95	30-40	5-35
		20-35	Silty clay	CH	A-7	0	0	100	95-100	90-100	90-100	50-65	25-35
		35-51	Clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	80-90	55-75	30-45	10-20
		51-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L92A: Darfur-----	78	0-9	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		9-19	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		19-31	Fine sandy loam, loam, loamy fine sand	SM	A-4	0	0	100	100	70-100	35-50	20-30	NP-5
		31-60	Stratified fine sand to loamy fine sand to fine sandy loam	SM	A-2, A-4	0	0	100	100	50-100	15-40	---	NP
Fieldon-----	10	0-19	Loam	CL-ML, ML, SC-SM	A-4	0	0	100	100	85-95	50-75	20-28	NP-10
		19-37	Fine sandy loam, very fine sandy loam, loam	SM, SC-SM	A-4	0	0	100	100	70-90	35-60	15-30	NP-5
		37-60	Stratified fine sand to loamy fine sand	SM	A-2, A-4	0	0	100	100	60-100	15-40	---	NP
Litchfield-----	5	0-20	Loamy fine sand	SM	A-2	0	0	100	100	80-95	15-35	15-20	NP-4
		20-33	Fine sand	SM	A-2	0	0	100	100	80-95	20-35	15-20	NP-4
		33-40	Very fine sandy loam	ML, SC-SM	A-4	0	0	100	95-100	90-100	80-95	0-25	NP-5
		40-80	Loamy fine sand, loamy sand, sand	SM	A-2, A-3	0	0	100	100	70-95	5-30	15-20	NP-4
Webster-----	5	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Dassel-----	2	0-6	Mucky fine sandy loam	SC-SM	A-4	0	0	100	95-100	70-85	50-65	15-30	NP-4
		6-23	Fine sandy loam	SC-SM	A-4	0	0	100	95-100	70-85	50-65	15-30	NP-4
		23-31	Loamy very fine sand	SM	A-2, A-4	0	0	100	95-100	55-80	25-50	15-30	NP-4
		31-60	Fine sand	SP-SM	A-2	0	0	100	80-100	45-90	10-55	---	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L93A: Muskego-----	82	0-16	Muck	PT	A-8	0	0	---	---	---	---	---	---
		16-76	Coprogenous earth	OL	A-5	0	0	95-100	95-100	85-100	75-96	40-50	2-8
		76-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Blue Earth-----	10	0-10	Mucky silty clay loam	OL, ML	A-5	0	0	95-100	95-100	85-95	80-95	41-50	2-8
		10-68	Mucky silty clay loam, clay loam, mucky silt loam	OL, ML	A-5	0	0	95-100	80-100	80-95	80-95	41-50	2-8
		68-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Mineral soil, drained-----	5	0-13	Loam	CL	A-6	0	0	95-100	90-100	75-100	60-90	30-35	10-15
		13-31	Silty clay loam, clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		31-45	Sandy loam, clay loam, silty clay loam	SC, CL	A-4, A-6	0	0	90-100	85-100	60-95	45-90	30-40	5-20
		45-80	Sandy loam, clay loam, loam	SM, SC, CL	A-4, A-6	0-1	0-2	85-100	75-95	60-90	40-90	25-40	3-20
Belleville-----	3	0-11	Sandy loam	SC-SM, SM	A-4	0	0	100	95-100	60-90	35-50	0-25	NP-5
		11-27	Loamy sand, fine sand, sand	SC-SM, SM, SP-SM	A-1-b, A-2, A-3, A-4	0	0	90-100	80-100	40-85	5-45	0-25	NP-5
		27-48	Loam, clay loam, silty clay loam	CL	A-6	0-1	0-2	95-100	90-98	80-95	55-90	20-40	10-25
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L94A: Lowlein-----	75	0-18	Fine sandy loam, sandy loam	SM, SC-SM	A-4	0	0	90-100	85-100	60-75	35-50	15-20	NP-5
		18-27	Fine sandy loam, loamy sand	SC-SM, SM	A-4	0	0	90-100	85-100	60-90	35-80	15-20	NP-5
		27-46	Stratified loamy sand to fine sandy loam	SM, SC-SM	A-2	0	0	90-100	85-100	60-90	25-80	0-20	NP-5
		46-72	Silt loam, clay loam, loam	CL	A-6	0	0	95-100	90-98	75-90	50-75	30-39	12-20
		72-80	Clay loam, silt loam, loam	CL	A-6	0	0	95-100	90-98	75-90	50-75	30-39	12-20
Linder-----	15	0-15	Loam	SC	A-4, A-6	0	0	100	95-100	80-95	48-80	25-40	8-15
		15-29	Sandy loam	SC-SM, SC	A-2, A-4	0	0	95-100	80-100	45-75	30-45	20-30	5-10
		29-60	Stratified gravelly coarse sand to coarse sand to loamy coarse sand, gravelly loamy sand, loamy coarse sand	SW, SP-SM	A-1	0	0-5	75-95	30-95	25-50	2-12	0-14	NP
Dickinson-----	8	0-14	Fine sandy loam	SM, SC-SM, SC	A-2, A-4	0	0	100	100	85-95	30-50	15-30	NP-10
		14-39	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	85-95	35-50	15-30	NP-10
		39-60	Sand, loamy fine sand, loamy sand	SM	A-2, A-3	0	0	100	100	70-90	5-20	0-14	NP
Darfur-----	2	0-9	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		9-19	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		19-31	Fine sandy loam, loam, loamy fine sand	SM	A-4	0	0	100	100	70-100	35-50	20-30	NP-5
		31-60	Stratified fine sand to loamy fine sand to fine sandy loam	SM	A-2, A-4	0	0	100	100	50-100	15-40	---	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L95E: Hawick-----	80	0-7	Gravelly coarse sandy loam	SM, SP-SM	A-1, A-2, A-3	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-10	Gravelly loamy coarse sand, gravelly coarse sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0-2	0-5	75-95	60-95	35-70	5-25	0-14	NP
		10-60	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Estherville----	10	0-8	Sandy loam	SC, SC-SM, SM	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		8-13	Sandy loam, loam, coarse sandy loam	SC, SC-SM, SM	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		13-60	Coarse sand, gravelly coarse sand, loamy coarse sand	GP, SM, SP, SP-SM	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
Tomall-----	10	0-33	Loam	SM, SC, CL-ML	A-4	0	0	100	100	85-100	45-90	20-35	2-10
		33-42	Loam, sandy loam	SC, SM	A-4	0	0	100	95-100	85-100	45-90	20-45	7-10
		42-47	Gravelly coarse sand, loamy coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	80-100	50-95	25-65	4-20	---	NP
		47-80	Gravelly loamy coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	60-100	50-90	20-60	2-10	---	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L96B: Estherville-----	55	0-13	Sandy loam	SC-SM, SM, SC	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		13-18	Sandy loam, loam, coarse sandy loam	SC-SM, SM, SC	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		18-23	Coarse sand, gravelly coarse sand, loamy coarse sand	SP-SM, SP, SM	A-2	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
		23-60	Coarse sand, gravelly coarse sand, loamy coarse sand	GP, SP-SM, SM, SP	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
Hawick-----	35	0-7	Gravelly coarse sandy loam, sandy loam	SM, SP-SM	A-1, A-2, A-3	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Tomall-----	8	0-33	Loam	SM, SC, CL-ML	A-4	0	0	100	100	85-100	45-90	20-35	2-10
		33-42	Loam, sandy loam	SM, SC	A-4	0	0	100	95-100	85-100	45-90	20-45	7-10
		42-47	Gravelly coarse sand, loamy coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	80-100	50-95	25-65	4-20	---	NP
		47-80	Gravelly loamy coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	60-100	50-90	20-60	2-10	---	NP
Biscay-----	2	0-20	Loam	ML, CL	A-6, A-7	0	0	95-100	95-100	70-95	50-80	35-50	10-25
		20-28	Loam, clay loam, sandy clay loam	ML, CL	A-6, A-7	0	0	95-100	90-100	70-90	50-75	30-50	10-20
		28-36	Gravelly loam, sandy loam, gravelly sandy loam	SM, SC-SM, SC	A-4	0	0-5	95-100	70-95	50-80	35-50	15-30	2-10
		36-60	Gravelly coarse sand	SP, GP, SP-SM, GP-GM	A-1	0	0-5	45-95	35-95	20-45	2-10	---	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L97C: Hawick-----	60	0-7	Gravelly sandy loam, sandy loam	SM, SP-SM	A-3, A-1, A-2	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Estherville----	30	0-13	Sandy loam	SC-SM, SM, SC	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		13-18	Sandy loam, loam, coarse sandy loam	SM, SC, SC-SM	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		18-23	Coarse sand, gravelly coarse sand, loamy coarse sand	SP-SM, SP, SM	A-2	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
		23-60	Coarse sand, gravelly coarse sand, loamy coarse sand	GP, SP-SM, SM, SP	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
Tomall-----	10	0-33	Loam	SM, SC, CL-ML	A-4	0	0	100	100	85-100	45-90	20-35	2-10
		33-42	Loam, sandy loam	SC, SM	A-4	0	0	100	95-100	85-100	45-90	20-45	7-10
		42-47	Gravelly coarse sand, loamy coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	80-100	50-95	25-65	4-20	---	NP
		47-80	Gravelly loamy coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0	0	60-100	50-90	20-60	2-10	---	NP
L98A: Crippin-----	50	0-15	Loam	CL	A-6, A-7	0	0	95-100	95-100	80-90	60-80	30-45	10-20
		15-27	Loam, clay loam	CL	A-6	---	0-5	95-100	90-100	80-90	60-80	30-40	10-20
		27-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L98A:													
Nicollet-----	40	0-17	Clay loam	CL, ML	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Canisteo-----	5	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Clarion-----	5	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L99B:													
Clarion-----	62	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Swanlake-----	25	0-9	Loam	CL	A-6	0	0-5	90-100	85-98	75-90	50-70	28-36	9-15
		9-43	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		43-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Nicollet-----	10	0-17	Clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Webster-----	3	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L100B:													
Clarion-----	45	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Estherville----	35	0-13	Sandy loam	SC-SM, SM, SC	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		13-18	Sandy loam, loam, coarse sandy loam	SC-SM, SM, SC	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		18-23	Coarse sand, gravelly coarse sand, loamy coarse sand	SP-SM, SP, SM	A-2	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
		23-60	Coarse sand, gravelly coarse sand, loamy coarse sand	GP, SP-SM, SM, SP	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
Lowleyn-----	5	0-14	Sandy loam	SM, SC-SM	A-4	0	0	90-100	85-100	60-75	35-50	15-20	NP-5
		14-24	Sandy loam, fine sandy loam	SM, SC-SM	A-4	0	0	90-100	85-100	60-90	35-50	15-20	NP-5
		24-31	Loamy sand, sand, fine sand	SM, SP-SM	A-2, A-3	0	0	90-100	85-100	50-75	5-35	0-5	NP
		31-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Nicollet-----	5	0-17	Clay loam	CL, ML	A-6, A-7	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		17-33	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		33-36	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		36-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Swanlake-----	5	0-9	Loam	CL	A-6	0	0-5	90-100	85-98	75-90	50-70	28-36	9-15
		9-43	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		43-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L100B: Webster-----	5	0-19	Clay loam	OL, CL	A-7, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		19-26	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		26-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L101C2: Omsrud, eroded--	40	0-9	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		9-19	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		19-36	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		36-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hawick-----	30	0-7	Gravelly sandy loam, sandy loam	SM, SP-SM	A-3, A-1, A-2	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Storden, eroded	5	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	5	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	5	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L101D2: Omsrud, eroded--	40	0-9	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		9-19	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		19-36	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		36-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hawick-----	25	0-7	Gravelly coarse sandy loam, sandy loam	SM, SP-SM	A-3, A-1, A-2	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP-SM, SP	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches						
								4	10	40	200		
		In				Pct	Pct					Pct	
L101D2:													
Storden, eroded	20	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	6	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		38-50	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	5	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	4	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L102C2:													
Omsrud, eroded--	45	0-9	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		9-19	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		19-36	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		36-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	25	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Omsrud-----	15	0-12	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		12-16	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		16-32	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		32-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	5	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L102D2:													
Omsrud, eroded--	45	0-9	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		9-19	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		19-36	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		36-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	20	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Omsrud-----	15	0-12	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		12-16	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		16-32	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		32-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	8	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		38-50	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	6	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	6	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L103A:													
Fieldon-----	50	0-19	Loam	CL-ML, ML, SC-SM	A-4	0	0	100	100	85-95	50-75	20-28	NP-10
		19-37	Fine sandy loam, very fine sandy loam, loam	SM, SC-SM	A-4	0	0	100	100	70-90	35-60	15-30	NP-5
		37-60	Stratified fine sand to loamy fine sand	SM	A-2, A-4	0	0	100	100	60-100	15-40	---	NP
Canisteo-----	35	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L103A:													
Darfur-----	10	0-9	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		9-19	Loam	SC-SM, OL	A-4	0	0	100	100	100	60-80	25-40	NP-10
		19-31	Fine sandy loam, loam, loamy fine sand	SM	A-4	0	0	100	100	70-100	35-50	20-30	NP-5
		31-60	Stratified fine sand to loamy fine sand to fine sandy loam	SM	A-2, A-4	0	0	100	100	50-100	15-40	---	NP
Glencoe-----	5	0-10	Clay loam	CL, ML, OL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L105C2:													
Lester, eroded--	45	0-7	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hawick-----	35	0-7	Gravelly sandy loam, sandy loam	SM, SP-SM	A-3, A-1, A-2	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	5	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L105C2: Storden, eroded	5	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L105D2: Lester, eroded--	45	0-7	Loam	CL, CL-ML	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hawick-----	35	0-7	Gravelly coarse sandy loam, sandy loam	SM, SP-SM	A-3, A-1, A-2	0-2	0-5	75-95	60-95	35-70	5-35	0-14	NP-4
		7-80	Gravelly coarse sand, coarse sand, sand	SP, SP-SM	A-1, A-2, A-3	0-2	0-5	60-95	50-95	30-65	2-10	0-14	NP
Ridgeton-----	8	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		38-50	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	5	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	5	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	2	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L106C2: Lester, eroded--	62	0-7	Loam	CL, CL-ML	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L106C2:													
Storden, eroded	20	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	5	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Reedslake-----	3	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L106D2:													
Lester, eroded--	62	0-7	Loam	CL, CL-ML	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		7-38	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	20	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	10	0-23	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		23-38	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		38-50	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		50-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	5	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	3	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L107A: Canisteo-----	50	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	35	0-10	Clay loam	OL, CL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Harps-----	10	0-13	Clay loam	CH, CL	A-6, A-7	0	0-5	95-100	95-100	80-90	65-80	35-55	15-35
		13-30	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Canisteo, depressional---	3	0-17	Silty clay loam	CL, ML	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		17-30	Clay loam, loam, silty clay loam	CL, ML	A-6	---	0-5	95-100	90-100	85-95	65-85	35-50	15-20
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Crippin-----	2	0-15	Loam	CL	A-6, A-7	0	0	95-100	95-100	80-90	60-80	30-45	10-20
		15-27	Loam, clay loam	CL	A-6	---	0-5	95-100	90-100	80-90	60-80	30-40	10-20
		27-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L108A: Cordova-----	65	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Rolfe-----	30	0-12	Silt loam	OL, ML, CL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	5-15
		12-20	Silt loam, clay loam	ML, CL	A-6, A-4	0	0	100	95-100	90-100	75-95	30-40	5-35
		20-35	Silty clay	CH	A-7	0	0	100	95-100	90-100	90-100	50-65	25-35
		35-51	Clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	80-90	55-75	30-45	10-20
		51-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L108A: Le Sueur-----	5	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L109A: Marna-----	65	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Barbert-----	30	0-7	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	90-100	25-40	5-15
		7-17	Silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	90-100	90-100	25-40	5-15
		17-43	Clay, silty clay	CH, MH	A-7	0	0	100	100	90-100	90-100	50-80	20-50
		43-60	Silty clay loam, silt loam	CL, ML, CL-ML	A-4, A-6, A-7	0	0	100	100	90-100	90-100	25-50	5-20
Guckeen-----	5	0-15	Silty clay loam	CH	A-7	0	0	100	95-100	95-100	80-95	40-55	15-25
		15-24	Silty clay, silty clay loam, clay	CH	A-7	0	0	100	95-100	95-100	80-95	40-65	15-30
		24-30	Clay loam, loam	CL	A-6, A-7	---	0-2	90-100	90-98	85-95	60-75	30-50	10-25
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L110E: Lester-----	50	0-5	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		5-34	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		34-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		60-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	30	0-32	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		32-40	Clay loam, loam	CL-ML, CL	A-7, A-6	0	0-2	95-100	90-100	65-95	50-85	20-45	5-20
		40-80	Clay loam, loam	CL	A-7, A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-45	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L110E:													
Cokato-----	10	0-16	Loam	CL	A-6	0	0-2	95-100	90-98	80-95	60-70	32-36	13-15
		16-30	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-5	95-100	90-98	80-95	65-80	34-43	14-21
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Belview-----	6	0-9	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		9-50	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	2	0-22	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		22-41	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	2	0-24	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		24-37	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		37-57	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L110F:													
Lester-----	55	0-6	Loam	CL-ML, CL	A-4, A-6	0	0-2	95-100	90-100	80-95	50-85	25-40	5-15
		6-25	Clay loam, loam	CL	A-6	0-1	0-3	95-100	90-100	80-95	55-75	35-40	15-20
		25-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Ridgeton-----	30	0-32	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		32-40	Clay loam, loam	CL-ML, CL	A-7, A-6	0	0-2	95-100	90-100	65-95	50-85	20-45	5-20
		40-80	Clay loam, loam	CL	A-7, A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-45	12-20
Cokato-----	8	0-16	Loam	CL	A-6	0	0-2	95-100	90-98	80-95	60-70	32-36	13-15
		16-30	Clay loam, loam, sandy clay loam	CL	A-6, A-7	0	0-5	95-100	90-98	80-95	65-80	34-43	14-21
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Belview-----	4	0-9	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		9-50	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	2	0-24	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		24-37	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		37-57	Clay loam, loam	CL, CL-ML	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		57-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10	4	10	40	200		
						inches	inches						
		In				Pct	Pct					Pct	
L110F: Hamel-----	1	0-22	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		22-41	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L111A: Nicollet-----	85	0-10	Silty clay loam	ML, CL	A-6, A-7-6	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		10-31	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		31-42	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		42-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Clarion-----	10	0-14	Loam	CL, CL-ML	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		14-33	Loam	CL-ML, CL	A-4, A-6	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		33-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Webster-----	5	0-24	Silty clay loam	OL, CL	A-7-6, A-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		24-45	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		45-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L112A: Webster-----	85	0-24	Silty clay loam	OL, CL	A-6, A-7-6	0	0-5	95-100	95-100	85-95	75-90	40-50	15-20
		24-45	Clay loam, silty clay loam, loam	CL	A-6, A-7	0	0-5	95-100	95-100	85-95	65-85	35-45	15-25
		45-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe-----	10	0-10	Clay loam	CL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L112A: Nicollet-----	5	0-10	Silty clay loam	ML, CL	A-6, A-7-6	0-1	0-5	95-100	90-100	85-100	55-85	35-50	10-25
		10-31	Clay loam, loam, silty clay loam	CL	A-6, A-7	0-1	0-5	95-100	90-100	80-95	55-80	35-50	15-25
		31-42	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		42-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L113B: Reedslake-----	75	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Le Sueur-----	10	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Reedslake, eroded-----	10	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Cordova-----	5	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L114A: Hanlon, rarely flooded-----	85	0-24	Fine sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	75-80	35-50	25-35	5-10
		24-52	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	75-80	35-50	25-35	5-10
		52-57	Sandy loam, fine sandy loam, loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	75-80	25-40	20-35	5-10
		57-80	Stratified fine sand to loamy fine sand to fine sandy loam, sandy loam, loamy sand	CL-ML, CL, SC, SC-SM, SM	A-2, A-4	0	0	100	100	80-90	20-60	15-35	3-10
Coland, occasionally flooded-----	10	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		25-54	Loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		54-60	Loam, sandy loam, sandy clay loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-15
Minneopa, rarely flooded-----	5	0-15	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	60-70	30-40	15-30	2-10
		15-20	Sandy loam, loamy sand, coarse sandy loam	SM, SC-SM	A-2, A-4	0	0	80-100	80-100	30-70	30-40	15-30	2-10
		20-60	Loamy sand, sand, gravelly coarse sand	SM, SP-SM	A-1, A-2, A-3	0	0	80-100	80-100	25-75	5-15	10-20	NP
L115A: Brownton-----	55	0-22	Silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-65	20-35
		22-38	Silty clay, clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-80	25-40
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L115A:	35	0-10	Silty clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
Lura-----		10-58	Silty clay, clay	CH	A-7	0	0	100	100	95-100	90-100	50-75	25-45
		58-72	Silty clay, silty clay loam, clay	CH, CL	A-7	0	0	100	100	95-100	90-100	40-75	15-45
Marna-----	10	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L116A:	45	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
Le Sueur-----		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lerdal-----	40	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		8-12	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		12-41	Silty clay loam, clay loam	CL, ML, CH, MH	A-7	0	0	95-100	90-100	80-95	70-90	45-70	20-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Mazaska-----	10	0-15	Silty clay loam	CL, CH	A-7, A-6	0	0	95-100	95-100	85-100	70-95	35-55	12-28
		15-42	Clay, silty clay loam	CH, CL	A-7	0	0	90-100	85-100	75-95	60-90	40-65	15-35
		42-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Kilkenny-----	5	0-11	Clay loam	ML, CL	A-6, A-7	0	0	95-100	95-100	80-95	70-85	35-50	10-25
		11-35	Clay loam, clay, silty clay loam	CH, MH	A-7	0	0	95-100	90-100	80-95	65-80	50-70	25-35
		35-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L117C2:													
Omsrud, eroded--	65	0-9	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		9-19	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		19-36	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		36-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Omsrud-----	15	0-12	Loam	CL	A-6	0	0-2	95-100	90-98	85-95	55-75	30-35	11-15
		12-16	Loam, clay loam	CL	A-6	0	0-2	95-100	90-98	75-95	55-80	32-39	12-18
		16-32	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		32-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Terril-----	10	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	5	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Storden, eroded	5	0-7	Loam	CL	A-6	0	0-5	95-100	95-98	75-95	60-75	28-36	9-15
		7-55	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		55-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L118A:													
Rushriver, frequently flooded-----	85	0-41	Stratified sandy loam to fine sandy loam	SC-SM, SM	A-4	0	0	95-100	75-90	45-75	30-45	0-28	NP-9
		41-80	Stratified fine sand to loamy very fine sand to silt loam	SC-SM, SM, SP	A-1, A-2, A-3, A-4	0	0-2	95-100	90-100	40-80	4-60	10-20	NP-5
Houghton, frequently flooded-----	5	0-60	Muck	PT	A-8	0	0	---	---	---	---	---	---

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L118A: Klossner, frequently flooded-----	5	0-22	Muck	PT	A-8	0	0	---	---	---	---	---	---
		22-45	Mucky silt loam, mucky silty clay loam	OL	A-6	0	0	100	95-100	90-100	85-95	40-49	10-30
		45-60	Silt loam, loam, silty clay loam	CL	A-6, A-7	0	0-5	90-100	85-100	60-100	55-90	40-48	10-25
Medo, frequently flooded-----	5	0-25	Muck	PT	A-8	---	---	---	---	---	---	---	---
		25-31	Sandy clay loam, mucky silt loam, silt loam	MH, CL	A-6, A-7	0	0	85-100	75-100	55-95	45-85	35-65	7-35
		31-45	Silt loam, mucky loam, mucky silt loam	CL, MH	A-6, A-7	0	0	85-100	75-100	55-95	45-85	35-65	7-35
		45-80	Gravelly coarse sand, gravelly loamy coarse sand, fine sand	SP, SP-SM, SM	A-1, A-2, A-3, A-4	0-2	0-5	75-95	60-95	20-75	2-40	15-25	NP-7
L119B: Angus-----	80	0-8	Loam	CL	A-6	0	0-5	95-100	90-100	80-95	50-85	30-40	11-15
		8-35	Clay loam, loam	CL	A-6	0-1	0-5	95-100	90-100	80-95	55-75	35-40	15-20
		35-40	Loam, clay loam	CL	A-6	0-1	0-5	95-100	90-100	75-90	50-75	32-39	13-18
		40-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Angus, eroded---	10	0-8	Clay loam	CL	A-6	0	0-5	95-100	90-100	80-95	50-85	30-40	11-15
		8-40	Clay loam, loam	CL	A-6	0-1	0-5	95-100	90-100	80-95	55-75	35-40	15-20
		40-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Cordova-----	5	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L119B: Le Sueur-----	5	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L120A: Good Thunder----	80	0-15	Silty clay loam	CL, ML	A-6, A-7-6	0	0	100	100	90-100	85-100	35-50	12-20
		15-32	Silty clay, silty clay loam	CH, MH	A-7	0	0	100	100	90-100	85-100	45-75	20-40
		32-80	Silt loam, silty clay loam	CL, CL-ML, ML	A-4, A-6, A-7	0	0	100	100	95-100	85-100	25-50	5-20
Ocheyedan-----	10	0-10	Loam	CL	A-6	0	0	100	100	75-90	65-80	30-40	10-15
		10-30	Sandy clay loam, fine sandy loam, loam	SC-SM, SC, CL, CL-ML	A-4, A-6	0	0	100	100	60-80	35-55	25-40	5-15
		30-60	Stratified loam to silt loam, sandy clay loam, silt loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	50-90	25-40	5-15
Minnetonka-----	10	0-13	Silty clay loam	CL, MH	A-6	0	0	95-100	95-100	90-98	85-95	40-55	15-20
		13-35	Silty clay, silty clay loam	CH, CL	A-7	0	0	95-100	95-100	90-98	85-95	40-65	15-35
		35-60	Silty clay loam, silt loam, clay loam	CL, ML, MH	A-6, A-7	0	0	95-100	85-100	75-100	60-95	30-55	10-25
L121B: Clarion-----	80	0-13	Clay loam	CL-ML, CL	A-4, A-6	0	0-5	95-100	95-100	75-90	50-75	25-40	5-15
		13-37	Clay loam	CL-ML, CL	A-6, A-4	0	0-5	90-100	85-100	75-90	50-75	25-40	5-15
		37-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L121B: Guckeen-----	15	0-15	Silty clay loam	CH	A-7	0	0	100	95-100	95-100	80-95	40-55	15-25
		15-24	Silty clay, silty clay loam, clay	CH	A-7	0	0	100	95-100	95-100	80-95	40-65	15-30
		24-30	Clay loam, loam	CL	A-6, A-7	---	0-2	90-100	90-98	85-95	60-75	30-50	10-25
		30-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Marna-----	5	0-20	Silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	45-75	15-45
		20-32	Clay, silty clay, silty clay loam	CH	A-7	0	0	95-100	90-100	90-100	85-95	50-80	20-45
		32-41	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		41-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L122B: Reedslake-----	55	0-12	Loam	CL, CL-ML	A-6	0	0-2	95-100	90-98	80-95	60-75	25-40	5-15
		12-26	Clay loam, loam	CL	A-6, A-7	0	0-2	95-100	90-98	80-95	60-80	32-45	12-25
		26-48	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Estherville-----	25	0-13	Sandy loam	SM, SC-SM, SC	A-2, A-4	0	0-5	90-100	80-100	50-75	25-50	20-30	2-10
		13-18	Sandy loam, loam, coarse sandy loam	SC-SM, SM, SC	A-1, A-2, A-4	0	0-5	85-100	80-95	40-75	15-45	20-30	2-8
		18-23	Coarse sand, gravelly coarse sand, loamy coarse sand	SP-SM, SP, SM	A-2	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
		23-60	Coarse sand, gravelly coarse sand, loamy coarse sand	SM, GP, SP-SM, SP	A-1	0	0-10	55-90	50-85	10-40	2-25	0-14	NP
Le Sueur-----	10	0-17	Clay loam	CL, ML	A-7, A-6	0	0	95-100	95-100	90-100	75-90	35-50	10-25
		17-37	Clay loam, loam, silty clay loam	CL	A-6, A-7	0	0	95-100	95-100	85-100	60-80	35-50	15-25
		37-46	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
		In				Pct	Pct					Pct	
L122B: Cordova-----	5	0-18	Clay loam	MH, ML, CL, OH	A-6, A-7	0	0	95-100	95-100	90-100	70-85	40-60	15-25
		18-38	Silty clay loam, clay loam	CL	A-6	0	0	90-100	90-100	85-95	65-90	40-50	20-30
		38-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lowlein-----	5	0-14	Sandy loam	SM, SC-SM	A-4	0	0	90-100	85-100	60-75	35-50	15-20	NP-5
		14-24	Sandy loam, fine sandy loam	SM, SC-SM	A-4	0	0	90-100	85-100	60-90	35-50	15-20	NP-5
		24-31	Loamy sand, sand, fine sand	SM, SP-SM	A-2, A-3	0	0	90-100	85-100	50-75	5-35	0-5	NP
		31-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L123A: Belleville-----	85	0-11	Sandy loam	SC-SM, SM	A-4	0	0	100	95-100	60-90	35-50	0-25	NP-5
		11-27	Loamy sand, fine sand, sand	SC-SM, SM, SP-SM	A-1-b, A-2-4, A-3, A-4	0	0	90-100	80-100	40-85	5-45	0-25	NP-5
		27-48	Loam, clay loam, silty clay loam	CL	A-6	0-1	0-2	95-100	90-98	80-95	55-90	30-40	10-20
		48-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Granby-----	15	0-12	Loamy fine sand	SM	A-2	0	0	100	100	50-80	15-35	0-14	NP
		12-24	Sand, fine sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0	100	95-100	45-80	5-35	0-14	NP
		24-60	Coarse sand, fine sand, loamy fine sand	SM, SP-SM	A-1, A-2, A-3	0	0	100	95-100	45-80	5-35	0-14	NP
L124A: Glencoe mucky clay loam-----	85	0-10	Mucky clay loam	OL	A-6	0	0	100	100	95-100	90-95	35-50	15-20
		10-29	Clay loam, loam	OL, ML, CL	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		29-42	Loam, clay loam, silty clay loam	ML, CL	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		42-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L124A: Canisteo-----	10	0-18	Clay loam	OL, CL	A-6	0	0	95-100	95-100	85-100	60-100	40-50	15-20
		18-39	Clay loam, loam	CL	A-6	0-1	0-2	95-100	80-98	75-90	50-75	30-40	12-20
		39-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Glencoe clay loam-----	5	0-10	Clay loam	OL, CL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	40-50	15-20
		10-35	Silty clay loam, clay loam, loam	CL, OL, ML	A-6, A-7	0	0	95-100	90-100	75-100	60-90	30-50	10-20
		35-48	Loam, clay loam, silty clay loam	CL, ML	A-6	0	0	95-100	90-100	75-100	60-90	30-40	5-20
		48-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L125A: Hanlon, rarely flooded-----	60	0-24	Fine sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	75-80	35-50	25-35	5-10
		24-52	Fine sandy loam, sandy loam	SM, SC, SC-SM	A-4	0	0	100	100	75-80	35-50	25-35	5-10
		52-57	Sandy loam, fine sandy loam, loamy fine sand	SC, SC-SM, SM	A-2, A-4	0	0	100	100	75-80	25-40	20-35	5-10
		57-80	Stratified fine sand to loamy fine sand to fine sandy loam, sandy loam, loamy sand	CL-ML, CL, SC, SC-SM, SM	A-2, A-4	0	0	100	100	80-90	20-60	15-35	3-10
Coland, occasionally flooded-----	25	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		25-54	Loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		54-60	Loam, sandy loam, sandy clay loam	CL-ML, SC-SM, SC, CL	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-15

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L125A: Minneopa, rarely flooded-----	15	0-15	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	60-70	30-40	15-30	2-10
		15-20	Sandy loam, loamy sand, coarse sandy loam	SM, SC-SM	A-2, A-4	0	0	80-100	80-100	30-70	30-40	15-30	2-10
		20-60	Loamy sand, sand, gravelly coarse sand	SM, SP-SM	A-1, A-2, A-3	0	0	80-100	80-100	25-75	5-15	10-20	NP
L126A: Coland, occasionally flooded-----	80	0-25	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		25-54	Loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		54-60	Loam, sandy loam, sandy clay loam	CL-ML, SC-SM, SC, CL	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-15
Minneopa, occasionally flooded-----	10	0-15	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	60-70	30-40	15-30	2-10
		15-20	Sandy loam, loamy sand, coarse sandy loam	SM, SC-SM	A-2, A-4	0	0	80-100	80-100	30-70	30-40	15-30	2-10
		20-60	Loamy sand, sand, gravelly coarse sand	SM, SP-SM	A-1, A-2, A-3	0	0	80-100	80-100	25-75	5-15	10-20	NP
Havelock, occasionally flooded-----	5	0-23	Clay loam	CH, CL	A-6	0	0	100	100	95-100	65-85	38-55	20-30
		23-35	Clay loam, silty clay loam	CH, CL	A-6	0	0	100	100	95-100	65-85	38-55	20-30
		35-60	Stratified loam to silt loam to clay loam, sandy loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L126A: Spillville, occasionally flooded-----	5	0-51	Loam	CL	A-6	0	0	100	95-100	85-95	60-80	25-40	10-20
		51-60	Sandy clay loam, loam, sandy loam	SC, CL, CL-ML, SC-SM	A-4, A-6	0	0	100	95-100	80-90	35-75	20-40	5-15
L127A: Coland, frequently flooded-----	80	0-12	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		12-30	Loam	CL	A-6, A-7	0	0	100	100	95-100	65-80	35-50	15-25
		30-55	Stratified fine sandy loam to loam, silty clay loam	SC-SM	A-6, A-4	0	0	100	100	95-100	65-80	30-40	8-25
		55-80	Loam, sandy loam, fine sandy loam	SC-SM, SC, CL-ML, CL	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-15
Minneopa, occasionally flooded-----	10	0-16	Sandy loam	SC-SM, SM	A-2, A-4	0	0	100	85-100	60-70	30-40	15-30	2-10
		16-29	Sandy loam, loamy sand, coarse sandy loam	SM, SC-SM	A-2	0	0	80-100	80-100	30-70	15-35	10-25	1-4
		29-60	Loamy sand, sand	SM, SP-SM	A-1, A-2, A-3	0	0	80-100	80-100	25-75	5-15	5-15	NP
Havelock, frequently flooded-----	5	0-30	Silt loam	CH, CL	A-6	0	0	100	100	95-100	65-85	39-55	20-30
		30-40	Clay loam, loam	CH, CL	A-7	0	0	100	100	95-100	65-85	45-55	20-30
		40-60	Stratified loam to silt loam to clay loam, sandy clay loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0	100	90-100	60-70	40-60	20-40	5-15

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10 inches	3-10 inches						
								4	10	40	200		
		In				Pct	Pct					Pct	
L127A: Spillville, occasionally flooded-----	5	0-51	Loam	CL	A-6	0	0	100	95-100	85-95	60-80	25-40	10-20
		51-60	Sandy clay loam, loam, sandy loam	SC, CL, CL-ML, SC-SM	A-4, A-6	0	0	100	95-100	80-90	35-75	20-40	5-15
L128A: Mazaska-----	60	0-15	Silty clay loam	CL, CH	A-6, A-7	0	0	95-100	95-100	85-100	70-95	35-55	12-28
		15-42	Clay, silty clay loam	CH, CL	A-7	0	0	90-100	85-100	75-95	60-90	40-65	15-35
		42-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Rolfe-----	30	0-12	Silt loam	OL, ML, CL	A-4, A-6	0	0	100	95-100	90-100	80-95	30-40	5-15
		12-20	Silt loam, clay loam	ML, CL	A-6, A-4	0	0	100	95-100	90-100	75-95	30-40	5-35
		20-35	Silty clay	CH	A-7	0	0	100	95-100	90-100	90-100	50-65	25-35
		35-51	Clay loam, loam	CL	A-6, A-7	0	0	95-100	90-100	80-90	55-75	30-45	10-20
		51-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Lerdal-----	10	0-8	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		8-12	Clay loam	CL	A-6, A-7	0	0	95-100	90-100	80-95	60-90	35-50	10-22
		12-41	Silty clay loam, clay loam	CL, ML, CH, MH	A-7	0	0	95-100	90-100	80-95	70-90	45-70	20-35
		41-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
L129B: Terril-----	90	0-27	Loam	CL	A-6	0	0-2	95-100	95-100	70-90	60-80	30-40	10-20
		27-40	Loam, clay loam	CL	A-6	0	0-3	95-100	90-100	70-90	60-80	30-40	5-20
		40-63	Clay loam, loam	CL	A-6	0	0-2	95-100	90-100	65-95	50-85	20-40	5-20
		63-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Delft-----	5	0-37	Loam	CL	A-6, A-7	0	0	95-100	90-100	75-90	60-80	30-45	10-20
		37-50	Clay loam, silt loam	CL	A-6	0	0	95-100	90-100	70-90	50-75	30-40	12-20
		50-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Hamel-----	5	0-24	Loam	CL, ML	A-4, A-6	0	0	100	95-100	85-100	60-85	30-40	5-20
		24-46	Clay loam, loam, silty clay loam	CH, CL	A-6	0	0	95-100	95-100	85-95	65-80	40-55	25-35
		46-80	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20

Table 14.--Engineering Index Properties--Continued

Map symbol and component name	Pct. of map unit	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
				Unified	AASHTO	>10	3-10						
						inches	inches	4	10	40	200		
		In				Pct	Pct					Pct	
L130A: Okoboji mucky silty clay loam	75	0-13	Mucky silty clay loam	OL	A-6	0	0	100	100	95-100	90-95	38-60	15-25
		13-35	Silty clay loam, silty clay	CH	A-7	0	0	100	100	90-100	80-95	50-60	30-35
		35-60	Silty clay loam, silty clay	CL	A-6	0	0	95-100	95-100	90-100	80-95	35-48	30-35
Okoboji silty clay loam-----	15	0-26	Silty clay loam	CH	A-7	0	0	100	100	90-100	80-95	50-60	30-35
		26-42	Silty clay loam, silty clay	CL, CH	A-7	0	0	100	100	90-100	80-95	48-60	30-35
		42-60	Silty clay loam	CH, CL	A-6	0	0	95-100	95-100	90-100	80-95	38-60	30-35
Brownton-----	5	0-22	Silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-65	20-35
		22-38	Silty clay, clay, silty clay loam	CH, MH	A-7	0	0	100	95-100	90-100	85-95	50-80	25-40
		38-60	Clay loam, loam	CL	A-6	0-1	0-2	95-100	90-98	75-90	50-75	30-40	12-20
Spicer-----	5	0-16	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	90-100	35-50	10-25
		16-40	Silt loam, silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-100	35-50	10-25
		40-60	Silt loam, silty clay loam	CL	A-4, A-6	0	0	100	100	95-100	85-100	30-40	5-20
M-W. Water, miscellaneous													
U3B. Udorthents (cut and fill land)													
W. Water													

Table 15.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
GP: Pits, gravel.													
Udipsamments.													
L5A: Delft, overwash-----	50	0-12	20-27	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	3.0-5.0	.24	.24	5	6	48
		12-37	20-30	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24			
		37-47	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		47-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	40	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe-----	5	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L13A: Klossner, drained----	80	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	2	134
		26-36	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		36-48	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		48-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Mineral soil, drained	15	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	18-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	15-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	15-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Houghton, drained----	5	0-10	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	2	134
		10-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L14A:													
Houghton, drained----	80	0-10	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	2	134
		10-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---			
Klossner, drained----	10	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	2	134
		26-36	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		36-48	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		48-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Mineral soil, drained	10	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	18-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	15-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	15-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L15A:													
Klossner, ponded-----	30	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	8	0
		26-33	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		33-40	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		40-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Okoboji, ponded-----	30	0-10	30-40	1.20-1.25	4.23-14.11	0.22-0.25	3.0-5.9	10-18	.32	.32	5	8	0
		10-52	35-45	1.35-1.40	1.41-4.23	0.18-0.20	6.0-8.9	4.0-8.0	.37	.37			
		52-60	35-45	1.35-1.40	1.41-4.23	0.18-0.20	6.0-8.9	0.2-1.0	.37	.37			
Glencoe, ponded-----	30	0-42	27-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	8	0
		42-50	25-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	2.0-6.0	.28	.28			
		50-60	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Houghton, ponded-----	10	0-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	8	0
L16A:													
Muskego, ponded-----	30	0-9	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---	1	8	0
		9-36	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---			
		36-60	18-35	0.30-1.10	0.42-1.41	0.18-0.24	3.0-5.9	6.0-20	.28	.28			
Blue Earth, ponded---	30	0-50	18-32	0.20-0.80	4.23-14.11	0.18-0.24	3.0-5.9	10-25	.28	.28	5	8	0
		50-60	18-32	0.20-0.80	4.23-14.11	0.18-0.24	0.0-2.9	10-25	.28	.28			
Houghton, ponded-----	30	0-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	8	0
Klossner, ponded-----	10	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	8	0
		26-33	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		33-40	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		40-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L26B:													
Shorewood-----	90	0-17	30-40	1.20-1.40	1.00-4.00	0.18-0.22	3.0-5.9	4.0-8.0	.28	.28	5	4	86
		17-39	36-55	1.20-1.35	0.00-4.00	0.13-0.16	6.0-8.9	1.0-4.0	.32	.32			
		39-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Good Thunder-----	5	0-15	30-40	1.20-1.40	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	4	86
		15-32	36-55	1.20-1.35	0.42-4.23	0.13-0.16	6.0-8.9	1.0-3.0	.32	.32			
		32-80	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	0.0-1.0	.37	.37			
Minnetonka-----	5	0-13	27-35	1.20-1.40	1.41-4.23	0.18-0.22	3.0-5.9	4.0-8.0	.28	.28	5	7	38
		13-35	35-60	1.20-1.35	0.42-1.41	0.13-0.19	6.0-8.9	0.2-1.0	.28	.28			
		35-60	25-40	1.25-1.55	1.41-14.11	0.16-0.21	3.0-5.9	0.0-0.2	.28	.28			
L36A:													
Hamel, overwash-----	50	0-13	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	3.0-5.0	.28	.28	5	6	48
		13-29	20-30	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28			
		29-50	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		50-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	43	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe-----	2	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	25-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	25-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L40B:													
Angus-----	45	0-8	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.28	.28	5	6	48
		8-35	24-35	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		35-40	24-35	1.55-1.75	4.23-14.11	0.14-0.19	0.0-2.9	0.0-0.5	.37	.37			
		40-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Kilkenny-----	40	0-11	27-30	1.15-1.25	1.41-4.23	0.17-0.19	3.0-5.9	2.0-4.0	.28	.28	5	6	48
		11-35	35-45	1.25-1.35	1.41-4.23	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
		35-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L40B:													
Lerdal-----	10	0-8	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	2.0-4.0	.37	.37	5	6	48
		8-12	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	0.2-1.5	.37	.37			
		12-41	35-55	1.25-1.35	0.00-1.00	0.13-0.19	6.0-8.9	0.2-0.8	.32	.32			
		41-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Mazaska-----	5	0-15	27-40	1.15-1.30	1.41-4.23	0.17-0.22	6.0-8.9	4.0-7.0	.28	.28	5	7	38
		15-42	35-50	1.25-1.40	0.42-1.41	0.10-0.16	6.0-8.9	0.5-2.0	.28	.28			
		42-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L41C2:													
Lester, eroded-----	45	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Kilkenny, eroded----	40	0-9	27-30	1.15-1.25	1.41-4.23	0.17-0.19	3.0-5.9	1.0-3.0	.28	.28	5	6	48
		9-53	35-45	1.25-1.35	1.41-4.23	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
		53-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Derrynane-----	5	0-19	30-40	1.20-1.40	0.42-4.23	0.17-0.19	6.0-8.9	5.0-10	.28	.28	5	4	86
		19-39	35-45	1.40-1.60	0.42-4.23	0.13-0.16	6.0-8.9	5.0-10	.28	.28			
		39-65	27-35	1.40-1.75	1.41-4.23	0.15-0.19	3.0-5.9	1.0-5.0	.28	.28			
		65-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L41D2:													
Lester, eroded-----	45	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Kilkenny, eroded----	35	0-9	27-30	1.15-1.25	1.41-4.23	0.17-0.19	3.0-5.9	1.0-3.0	.28	.28	5	6	48
		9-53	35-45	1.25-1.35	1.41-4.23	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
		53-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L41D2:													
Derrynane-----	5	0-19	30-40	1.20-1.40	0.42-4.23	0.17-0.19	6.0-8.9	5.0-10	.28	.28	5	4	86
		19-39	35-45	1.40-1.60	0.42-4.23	0.13-0.16	6.0-8.9	5.0-10	.28	.28			
		39-65	27-35	1.40-1.75	1.41-4.23	0.15-0.19	3.0-5.9	1.0-5.0	.28	.28			
		65-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	5	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L41E:													
Lester-----	45	0-5	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	4.0-8.0	.28	.28	5	6	48
		5-34	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		34-60	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Kilkenny-----	40	0-7	27-30	1.15-1.25	1.41-4.23	0.17-0.19	3.0-5.9	2.0-4.0	.28	.28	5	6	48
		7-31	35-45	1.25-1.35	1.41-4.23	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
		31-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-24	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		24-37	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		37-57	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		57-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Derrynane-----	5	0-20	30-40	1.20-1.40	0.42-4.23	0.17-0.19	6.0-8.9	5.0-10	.28	.28	5	4	86
		20-40	35-45	1.40-1.60	0.42-4.23	0.13-0.16	6.0-8.9	5.0-10	.28	.28			
		40-54	27-40	1.40-1.75	1.41-4.23	0.15-0.19	3.0-5.9	1.0-5.0	.28	.28			
		54-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	5	0-32	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-8.0	.24	.24	5	6	48
		32-40	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		40-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L48A:													
Derrynane, overwash--	50	0-16	30-40	1.20-1.40	0.42-4.23	0.17-0.19	6.0-8.9	3.0-5.0	.28	.28	5	4	86
		16-48	35-45	1.40-1.60	0.42-4.23	0.13-0.16	6.0-8.9	5.0-7.0	.28	.28			
		48-67	27-35	1.40-1.75	1.41-4.23	0.15-0.19	3.0-5.9	3.0-5.0	.28	.28			
		67-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Derrynane-----	40	0-19	30-40	1.20-1.40	0.42-4.23	0.17-0.19	6.0-8.9	5.0-10	.28	.28	5	4	86
		19-39	35-45	1.40-1.60	0.42-4.23	0.13-0.16	6.0-8.9	5.0-10	.28	.28			
		39-65	27-35	1.40-1.75	1.41-4.23	0.15-0.19	3.0-5.9	1.0-5.0	.28	.28			
		65-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L48A:													
Glencoe-----	5	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L49A:													
Klossner, surface drained-----	65	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	2	134
		26-33	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		33-40	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		40-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Klossner, drained----	20	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	2	134
		26-36	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		36-48	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		48-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Mineral soil, drained	15	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	18-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	15-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	15-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L50A:													
Houghton, surface drained-----	40	0-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	2	134
Muskego, surface drained-----	40	0-9	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---	1	2	134
		9-36	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---			
		36-60	18-35	0.30-1.10	0.42-1.41	0.18-0.24	3.0-5.9	6.0-20	.28	.28			
Klossner, drained----	10	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	2	134
		26-36	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		36-48	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		48-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Mineral soil, drained	10	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	18-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	15-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	15-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L51C2:													
Gladek, eroded-----	80	0-10	18-27	1.15-1.30	4.00-14.00	0.22-0.24	0.0-2.9	2.0-4.0	.28	.28	5	6	48
		10-39	25-35	1.20-1.45	4.00-14.00	0.18-0.20	3.0-5.9	0.0-0.8	.43	.43			
		39-80	12-30	1.20-1.50	4.00-14.00	0.17-0.22	0.0-2.9	0.0-0.2	.43	.43			
Barrington-----	10	0-15	20-27	1.20-1.40	4.00-14.00	0.22-0.26	0.0-2.9	3.0-5.0	.32	.32	5	6	48
		15-33	22-35	1.20-1.45	4.00-14.00	0.18-0.20	3.0-5.9	0.0-2.0	.43	.43			
		33-60	7-28	1.50-1.70	4.00-14.00	0.07-0.11	0.0-2.9	0.0-0.5	.43	.43			
Lester, eroded-----	5	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Madelia-----	5	0-19	27-35	1.20-1.30	4.00-14.00	0.18-0.24	3.0-5.9	4.0-8.0	.28	.28	5	7	38
		19-37	18-35	1.25-1.35	4.00-14.00	0.16-0.22	3.0-5.9	0.8-2.0	.28	.28			
		37-60	18-35	1.30-1.40	4.00-14.00	0.16-0.22	0.0-2.9	0.1-0.8	.37	.37			
L56A:													
Muskego, frequently flooded-----	45	0-9	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---	1	8	0
		9-36	---	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	---	---			
		36-60	18-35	0.30-1.10	0.42-1.41	0.18-0.24	3.0-5.9	6.0-20	.28	.28			
Klossner, frequently flooded-----	45	0-26	---	0.25-0.55	1.41-42.34	0.35-0.48	---	25-60	---	---	2	8	0
		26-33	22-35	1.10-1.25	4.23-14.11	0.22-0.26	3.0-5.9	10-20	.37	.37			
		33-40	22-35	1.30-1.40	1.41-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		40-80	15-32	1.35-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.0-5.0	.28	.28			
Suckercreek, frequently flooded--	10	0-22	7-20	1.20-1.60	14.11-42.34	0.18-0.24	0.0-2.9	3.0-6.0	.28	.28	5	8	0
		22-80	2-18	1.45-1.65	14.11-42.34	0.08-0.20	0.0-2.9	0.2-3.0	.28	.28			
L57A:													
Medo, drained-----	80	0-27	---	0.25-0.45	1.41-42.34	0.35-0.45	---	55-85	---	---	2	2	134
		27-35	15-30	1.15-1.65	4.23-42.34	0.13-0.20	3.0-5.9	5.0-20	.24	.24			
		35-39	15-30	1.15-1.65	4.23-42.34	0.13-0.20	3.0-5.9	0.5-2.0	.24	.24			
		39-80	0-10	1.50-1.65	42.34-141.14	0.03-0.10	0.0-2.9	0.0-0.5	.10	.10			
Mineral soil, drained	15	0-23	6-18	1.30-1.45	14.11-42.34	0.16-0.20	0.0-2.9	3.0-15	.20	.20	4	3	86
		23-31	2-6	1.40-1.60	14.11-42.34	0.12-0.17	0.0-2.9	0.5-1.0	.20	.20			
		31-60	2-6	1.45-1.65	42.34-141.14	0.02-0.08	0.0-2.9	0.0-0.5	.05	.15			
Houghton, drained----	5	0-10	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---	3	2	134
		10-80	---	0.15-0.25	1.41-42.34	0.35-0.45	---	70-99	---	---			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L63A:													
Klossner-----	85	0-25	0-0	0.25-0.55	1.00-42.00	0.35-0.48	---	25-60	---	---	2	2	134
		25-40	22-35	1.30-1.40	1.00-14.00	0.18-0.22	3.0-5.9	4.0-10	.28	.28			
		40-80	28-45	1.30-1.40	1.00-14.00	0.18-0.22	3.0-5.9	0.5-4.0	.28	.28			
Lura-----	10	0-10	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	4.0-12	.28	.28	5	4	86
		10-58	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	1.0-4.0	.32	.32			
		58-72	28-60	1.30-1.45	0.00-4.00	0.11-0.19	6.0-8.9	0.0-1.0	.32	.32			
Brownton-----	5	0-22	35-40	1.20-1.30	0.00-1.00	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		22-38	35-60	1.20-1.30	0.00-1.00	0.13-0.16	6.0-8.9	0.2-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L64A:													
Tadkee-----	50	0-6	2-12	1.20-1.60	42.34-141.14	0.10-0.12	0.0-2.9	4.0-10	.17	.17	5	2	134
		6-34	0-10	1.45-1.60	42.34-141.14	0.05-0.12	0.0-2.9	0.1-0.5	.17	.17			
		34-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Tadkee, depressional	36	0-6	2-12	0.25-0.45	1.41-42.34	0.35-0.45	0.0-2.9	15-30	.10	.10	5	2	134
		6-27	0-10	1.45-1.60	42.34-141.14	0.05-0.12	0.0-2.9	0.1-0.5	.17	.17			
		27-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Better drained soil--	8	0-6	3-6	1.50-1.55	42.00-141.00	0.08-0.12	0.0-2.9	1.0-4.0	.17	.17	5	2	134
		6-25	2-6	1.50-1.55	42.00-141.00	0.07-0.11	0.0-2.9	0.5-1.0	.17	.17			
		25-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Granby-----	4	0-12	2-14	1.20-1.60	42.34-141.14	0.10-0.12	0.0-2.9	4.0-10	.17	.17	5	2	134
		12-24	0-14	1.45-1.60	42.34-141.14	0.05-0.12	0.0-2.9	0.0-0.5	.17	.17			
		24-60	0-10	1.45-1.60	42.34-141.14	0.05-0.09	0.0-2.9	0.0-0.5	.17	.17			
Less sandy soil-----	2	0-4	2-12	1.20-1.60	42.34-141.14	0.10-0.12	0.0-2.9	4.0-10	.17	.17	5	2	134
		4-20	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		20-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L73A:													
Blue Earth-----	80	0-10	18-32	0.20-0.80	4.00-14.00	0.18-0.24	3.0-5.9	10-25	.28	.28	5	6	48
		10-68	18-32	0.20-0.80	4.00-14.00	0.18-0.24	0.0-2.9	10-20	.28	.28			
		68-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Belleville-----	10	0-11	12-18	1.30-1.50	14.11-42.34	0.13-0.18	0.0-2.9	3.0-6.0	.20	.20	3	3	86
		11-27	2-12	1.40-1.55	42.34-141.14	0.04-0.12	0.0-2.9	0.1-0.5	.17	.17			
		27-48	20-30	1.45-1.70	1.41-4.23	0.12-0.20	3.0-5.9	0.1-0.5	.32	.32			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L73A: Canisteo-----	10	0-18 18-39 39-80	27-35 25-35 20-30	1.25-1.35 1.30-1.50 1.35-1.55	4.00-14.00 4.00-14.00 4.00-14.00	0.18-0.22 0.12-0.18 0.15-0.19	3.0-5.9 0.0-2.9 1.0-4.2	4.0-7.0 0.5-1.0 0.1-0.5	.24 .32 .32	.24 .32 .37	5	4L	86
L74A: Estherville-----	87	0-13 13-18 18-23 23-60	5-15 10-18 0-8 0-8	1.25-1.35 1.35-1.60 1.50-1.65 1.50-1.65	14.00-42.00 14.00-42.00 42.00-141.00 42.00-141.00	0.13-0.18 0.13-0.18 0.02-0.04 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	2.0-4.0 0.0-0.5 0.0-0.5 0.0-0.5	.20 .20 .10 .10	.20 .20 .10 .10	3	3	86
Hawick-----	10	0-7 7-80	2-10 1-5	1.50-1.65 1.55-1.65	14.11-141.14 141.14-282.29	0.03-0.13 0.02-0.06	0.0-2.9 0.0-2.9	1.0-3.0 0.0-0.5	.10 .10	.15 .15	5	8	86
Biscay-----	3	0-20 20-28 28-36 36-60	18-30 18-30 10-28 1-6	1.20-1.30 1.25-1.35 1.35-1.55 1.55-1.65	4.00-14.00 4.00-14.00 14.00-42.00 42.00-141.00	0.20-0.22 0.17-0.19 0.11-0.17 0.02-0.04	3.0-5.9 3.0-5.9 0.0-2.9 0.0-2.9	4.0-8.0 0.5-1.0 0.5-1.0 0.0-0.5	.28 .28 .28 .05	.28 .28 .32 .10	4	6	48
L75B: Barrington-----	85	0-15 15-33 33-60	20-27 22-35 7-28	1.20-1.40 1.20-1.45 1.50-1.70	4.00-14.00 4.00-14.00 4.00-14.00	0.22-0.26 0.18-0.20 0.07-0.11	0.0-2.9 3.0-5.9 0.0-2.9	3.0-5.0 0.0-2.0 0.0-0.5	.32 .43 .43	.32 .43 .43	5	6	48
Gladek-----	10	0-10 10-39 39-80	18-27 25-35 12-30	1.15-1.30 1.20-1.45 1.20-1.50	4.00-14.00 4.00-14.00 4.00-14.00	0.22-0.24 0.18-0.20 0.17-0.22	0.0-2.9 3.0-5.9 0.0-2.9	2.0-4.0 0.0-0.8 0.0-0.2	.28 .43 .43	.28 .43 .43	5	6	48
Madelia-----	5	0-19 19-37 37-60	27-35 18-35 18-35	1.20-1.30 1.25-1.35 1.30-1.40	4.00-14.00 4.00-14.00 4.00-14.00	0.18-0.24 0.16-0.22 0.16-0.22	3.0-5.9 3.0-5.9 0.0-2.9	4.0-8.0 0.8-2.0 0.1-0.8	.28 .28 .37	.28 .28 .37	5	7	38
L76B: Dickinson-----	80	0-14 14-39 39-60	10-18 10-15 4-10	1.50-1.55 1.45-1.55 1.60-1.70	14.00-42.00 14.00-42.00 42.00-141.00	0.12-0.15 0.12-0.15 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.2-0.8 0.0-0.5	.20 .17 .15	.20 .17 .15	4	3	86
Litchfield-----	13	0-20 20-33 33-40 40-80	5-10 5-10 10-20 1-8	1.30-1.50 1.40-1.65 1.15-1.30 1.45-1.65	42.34-141.14 14.11-42.34 4.23-14.11 42.34-141.14	0.10-0.12 0.07-0.16 0.22-0.24 0.08-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.5-3.0 0.5-1.0 0.2-0.8 0.1-0.5	.17 .17 .32 .17	.17 .17 .32 .17	4	2	134
Darfur-----	5	0-9 9-19 19-31 31-60	14-18 14-18 13-18 5-15	1.20-1.35 1.20-1.35 1.35-1.50 1.45-1.60	4.00-14.00 4.00-14.00 14.00-42.00 14.00-42.00	0.20-0.22 0.20-0.22 0.15-0.17 0.08-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	5.0-8.0 2.0-6.0 0.2-0.8 0.0-0.5	.20 .20 .20 .20	.20 .20 .20 .20	5	5	56

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L76B:													
Clarion-----	2	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	---	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L77A:													
Brownston-----	75	0-22	35-40	1.20-1.30	0.00-1.00	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		22-38	35-60	1.20-1.30	0.00-1.00	0.13-0.16	6.0-8.9	0.2-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Marna-----	15	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lura-----	10	0-10	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	4.0-12	.28	.28	5	4	86
		10-58	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	1.0-4.0	.32	.32			
		58-72	28-60	1.30-1.45	0.00-4.00	0.11-0.19	6.0-8.9	0.0-1.0	.32	.32			
L78A:													
Canisteo-----	65	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Crippin-----	10	0-15	22-27	1.35-1.40	4.00-14.00	0.20-0.22	0.0-2.9	5.0-6.0	.24	.24	5	4L	86
		15-27	24-30	1.40-1.55	4.00-14.00	0.17-0.19	---	0.8-2.5	.28	.28			
		27-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe-----	10	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo, depressional-----	5	0-17	27-32	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-8.0	.24	.24	5	4L	86
		17-30	20-35	1.35-1.50	4.00-14.00	0.15-0.19	3.0-5.9	2.0-4.0	.32	.32			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Harps-----	5	0-13	27-35	1.35-1.40	4.23-14.11	0.19-0.21	3.0-5.9	3.0-5.0	.24	.24	5	4L	86
		13-30	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Webster-----	5	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L79B:													
Clarion-----	65	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Clarion, eroded-----	25	0-10	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	2.0-3.5	.24	.24	5	6	48
		10-38	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Nicollet-----	8	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Webster-----	2	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L80C2:													
Lester, eroded-----	75	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	5	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Reedslake-----	5	0-12	20-26	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-26	22-32	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		26-48	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	5	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	18-30	1.35-1.65	4.23-14.11	0.15-0.19	3.0-5.9	0.0-1.0	.37	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
L80D2:		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Lester, eroded-----	75	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	10	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	8	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	18-30	1.35-1.65	4.23-14.11	0.15-0.19	3.0-5.9	0.0-1.0	.37	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	2	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L81A:													
Cordova-----	85	0-18	27-30	1.25-1.45	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
		18-38	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	1.0-4.0	.28	.28			
		38-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Le Sueur-----	10	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Rolfe-----	5	0-12	22-27	1.35-1.40	4.23-14.11	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	5	6	48
		12-20	22-27	1.40-1.50	4.23-14.11	0.22-0.24	0.0-2.9	1.0-2.0	.28	.28			
		20-35	39-45	1.50-1.60	0.42-1.41	0.11-0.13	6.0-8.9	1.0-2.0	.28	.28			
		35-51	25-35	1.50-1.60	1.41-14.11	0.14-0.16	3.0-5.9	0.0-1.0	.28	.28			
		51-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L82A:													
Marna-----	85	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L82A:													
Barbert-----	10	0-7	18-27	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	4.0-7.0	.28	.28	5	6	48
		7-17	18-27	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	0.2-0.8	.28	.28			
		17-43	45-60	1.20-1.35	0.00-1.00	0.10-0.14	6.0-8.9	1.0-4.0	.28	.28			
		43-60	18-32	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	0.1-0.8	.28	.28			
Guckeen-----	5	0-15	35-40	1.20-1.30	1.41-4.23	0.16-0.19	6.0-8.9	4.0-6.0	.28	.28	5	4	86
		15-24	35-50	1.25-1.35	0.42-4.23	0.13-0.16	6.0-8.9	0.5-1.5	.28	.28			
		24-30	24-40	1.35-1.80	0.42-4.23	0.15-0.17	3.0-5.9	0.2-0.8	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L83A:													
Webster-----	65	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe-----	15	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo-----	10	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	25-35	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Nicollet-----	10	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L84A:													
Glencoe-----	80	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Very poorly drained muck-----	10	0-12	0-0	0.25-0.55	1.00-42.00	0.35-0.48	---	25-60	---	---	2	2	134
		12-29	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		29-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo-----	5	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L84A: Harps-----	5	0-13	27-35	1.35-1.40	4.23-14.11	0.19-0.21	3.0-5.9	3.0-5.0	.24	.24	5	4L	86
		13-30	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L85A: Nicollet-----	85	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Clarion-----	10	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Webster-----	5	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L86A: Madelia-----	90	0-19	27-35	1.20-1.30	4.00-14.00	0.18-0.24	3.0-5.9	4.0-8.0	.28	.28	5	7	38
		19-37	18-35	1.25-1.35	4.00-14.00	0.16-0.22	3.0-5.9	0.8-2.0	.28	.28			
		37-60	18-35	1.30-1.40	4.00-14.00	0.16-0.22	0.0-2.9	0.1-0.8	.37	.37			
Okoboji-----	5	0-26	35-42	1.30-1.40	1.00-4.00	0.21-0.23	6.0-8.9	5.0-10	.32	.32	5	4	86
		26-42	38-45	1.30-1.40	1.00-4.00	0.18-0.20	6.0-8.9	0.5-2.0	.32	.32			
		42-60	28-35	1.35-1.40	1.00-4.00	0.18-0.20	6.0-8.9	0.2-0.8	.32	.32			
Spicer-----	3	0-16	29-35	1.20-1.30	4.00-14.00	0.18-0.24	3.0-5.9	4.0-8.0	.28	.28	5	4L	86
		16-40	18-35	1.25-1.35	4.00-14.00	0.16-0.22	3.0-5.9	0.8-2.0	.37	.37			
		40-60	18-35	1.25-1.35	4.00-14.00	0.16-0.22	0.0-2.9	0.1-0.8	.37	.37			
Kingston-----	2	0-16	27-32	1.20-1.30	4.23-14.11	0.18-0.24	0.0-2.9	4.0-8.0	.28	.28	5	7	38
		16-25	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37			
		25-60	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	0.1-0.5	.37	.37			
L87A: Kingston-----	85	0-16	27-32	1.20-1.30	4.23-14.11	0.18-0.24	0.0-2.9	4.0-8.0	.28	.28	5	7	38
		16-25	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	1.0-3.0	.37	.37			
		25-60	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	0.1-0.5	.37	.37			
Truman-----	10	0-14	18-27	1.25-1.35	4.00-14.00	0.20-0.23	0.0-2.9	4.0-8.0	.32	.32	5	6	48
		14-36	18-32	1.30-1.45	4.00-14.00	0.18-0.21	0.0-2.9	1.0-2.0	.43	.43			
		36-60	18-32	1.35-1.45	4.00-14.00	0.18-0.20	0.0-2.9	0.0-1.0	.43	.43			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L87A:													
Madelia-----	5	0-19	27-35	1.20-1.30	4.00-14.00	0.18-0.24	3.0-5.9	4.0-8.0	.28	.28	5	7	38
		19-37	18-35	1.25-1.35	4.00-14.00	0.16-0.22	3.0-5.9	0.8-2.0	.28	.28			
		37-60	18-35	1.30-1.40	4.00-14.00	0.16-0.22	0.0-2.9	0.1-0.8	.37	.37			
L88A:													
Lura-----	85	0-10	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	4.0-12	.28	.28	5	4	86
		10-58	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	1.0-4.0	.32	.32			
		58-72	28-60	1.30-1.45	0.00-4.00	0.11-0.19	6.0-8.9	0.0-1.0	.32	.32			
Brownton-----	10	0-22	35-40	1.20-1.30	0.00-1.00	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		22-38	35-60	1.20-1.30	0.00-1.00	0.13-0.16	6.0-8.9	0.2-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Organic soil-----	5	0-10	0-0	0.25-0.55	1.00-42.00	0.35-0.48	---	25-60	---	---	2	2	134
		10-26	31-40	1.10-1.25	4.00-14.00	0.22-0.26	3.0-5.9	10-20	.37	.37			
		26-48	31-40	1.30-1.40	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
		48-80	28-40	1.30-1.45	0.00-4.00	0.11-0.19	6.0-8.9	0.0-1.0	.32	.32			
L89A:													
Guckeen-----	82	0-15	35-40	1.20-1.30	1.41-4.23	0.16-0.19	6.0-8.9	4.0-6.0	.28	.28	5	4	86
		15-24	35-50	1.25-1.35	0.42-4.23	0.13-0.16	6.0-8.9	0.5-1.5	.28	.28			
		24-30	24-40	1.35-1.80	0.42-4.23	0.15-0.17	3.0-5.9	0.2-0.8	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Marna-----	10	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Clarion clay loam----	8	0-13	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		13-37	27-30	1.30-1.55	4.00-14.00	0.17-0.19	---	0.5-1.0	.37	.37			
		37-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L90A:													
Le Sueur-----	75	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Cordova-----	13	0-18	27-30	1.25-1.45	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
		18-38	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	1.0-4.0	.28	.28			
		38-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L90A: Reedslake-----	12	0-12	20-26	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-26	22-32	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		26-48	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L91A: Mazaska-----	85	0-15	27-40	1.15-1.30	1.41-4.23	0.17-0.22	6.0-8.9	4.0-7.0	.28	.28	5	7	38
		15-42	35-50	1.25-1.40	0.42-1.41	0.10-0.16	6.0-8.9	0.5-2.0	.28	.28			
		42-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lerdal-----	10	0-8	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	2.0-4.0	.37	.37	5	7	38
		8-12	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	0.2-1.5	.37	.37			
		12-41	35-55	1.25-1.35	0.00-1.00	0.13-0.19	6.0-8.9	0.2-0.8	.32	.32			
		41-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Rolfe-----	5	0-12	22-27	1.35-1.40	4.23-14.11	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	5	6	48
		12-20	22-27	1.40-1.50	4.23-14.11	0.22-0.24	0.0-2.9	1.0-2.0	.28	.28			
		20-35	39-45	1.50-1.60	0.42-1.41	0.11-0.13	6.0-8.9	1.0-2.0	.28	.28			
		35-51	25-35	1.50-1.60	1.41-14.11	0.14-0.16	3.0-5.9	0.0-1.0	.28	.28			
		51-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L92A: Darfur-----	78	0-9	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	5.0-8.0	.20	.20	5	5	56
		9-19	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	2.0-6.0	.20	.20			
		19-31	13-18	1.35-1.50	14.00-42.00	0.15-0.17	0.0-2.9	0.2-0.8	.20	.20			
		31-60	5-15	1.45-1.60	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			
Fieldon-----	10	0-19	15-22	1.25-1.40	4.00-14.00	0.18-0.20	0.0-2.9	5.0-8.0	.28	.28	4	4L	86
		19-37	10-18	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.2-0.8	.20	.20			
		37-60	5-15	1.40-1.60	42.00-141.00	0.05-0.07	0.0-2.9	0.0-0.5	.20	.20			
Litchfield-----	5	0-20	5-10	1.30-1.50	42.34-141.14	0.10-0.12	0.0-2.9	1.5-3.0	.17	.17	4	2	134
		20-33	5-10	1.40-1.65	14.11-42.34	0.07-0.16	0.0-2.9	0.5-1.0	.17	.17			
		33-40	10-20	1.15-1.30	4.23-14.11	0.22-0.24	0.0-2.9	0.2-0.8	.32	.32			
		40-80	1-8	1.45-1.65	42.34-141.14	0.08-0.10	0.0-2.9	0.1-0.5	.17	.17			
Webster-----	5	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Dassel-----	2	0-6	10-24	1.00-1.40	14.00-42.00	0.18-0.24	0.0-2.9	3.0-20	.20	.20	4	5	56
		6-23	10-24	1.00-1.40	14.00-42.00	0.18-0.24	0.0-2.9	3.0-8.0	.20	.20			
		23-31	2-6	1.40-1.60	14.00-42.00	0.12-0.17	0.0-2.9	0.5-2.0	.20	.20			
		31-60	2-8	1.45-1.65	42.00-141.00	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L93A:													
Muskego-----	82	0-16	0-0	0.10-0.21	4.23-42.34	0.35-0.45	---	60-90	.10	.10	1	2	134
		16-76	18-35	0.30-1.10	0.00-1.00	0.18-0.24	3.0-5.9	6.0-20	.28	.28			
		76-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Blue Earth-----	10	0-10	18-32	0.20-0.80	4.00-14.00	0.18-0.24	3.0-5.9	10-25	.28	.28	5	6	48
		10-68	18-32	0.20-0.80	4.00-14.00	0.18-0.24	0.0-2.9	10-20	.28	.28			
		68-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Mineral soil, drained	5	0-13	25-27	1.35-1.45	4.23-14.11	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		13-31	18-35	1.35-1.45	1.41-14.11	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		31-45	15-35	1.35-1.50	1.41-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		45-80	15-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Belleville-----	3	0-11	12-18	1.30-1.50	14.11-42.34	0.13-0.18	0.0-2.9	3.0-6.0	.20	.20	3	3	86
		11-27	2-12	1.40-1.55	42.34-141.14	0.04-0.12	0.0-2.9	0.1-0.5	.17	.17			
		27-48	20-30	1.45-1.70	1.41-4.23	0.12-0.20	3.0-5.9	0.1-0.5	.32	.32			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L94A:													
Lowlein-----	75	0-18	10-18	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	2.5-4.0	.20	.20	5	3	86
		18-27	10-18	1.35-1.45	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24			
		27-46	8-12	1.35-1.45	14.00-42.00	0.12-0.14	0.0-2.9	0.5-1.0	.24	.24			
		46-72	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		72-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Linder-----	15	0-15	14-20	1.40-1.45	4.00-14.00	0.20-0.22	0.0-2.9	3.0-4.0	.24	.24	4	5	56
		15-29	10-18	1.45-1.55	14.00-42.00	0.15-0.17	0.0-2.9	0.0-0.5	.24	.24			
		29-60	2-8	1.55-1.75	141.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.20			
Dickinson-----	8	0-14	10-18	1.50-1.55	14.00-42.00	0.12-0.15	0.0-2.9	1.0-2.0	.20	.20	4	3	86
		14-39	10-15	1.45-1.55	14.00-42.00	0.12-0.15	0.0-2.9	0.2-0.8	.17	.17			
		39-60	4-10	1.60-1.70	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.15	.15			
Darfur-----	2	0-9	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	5.0-8.0	.20	.20	5	5	56
		9-19	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	2.0-6.0	.20	.20			
		19-31	13-18	1.35-1.50	14.00-42.00	0.15-0.17	0.0-2.9	0.2-0.8	.20	.20			
		31-60	5-15	1.45-1.60	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			
L95E:													
Hawick-----	80	0-7	7-12	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-10	1-10	1.50-1.65	42.34-141.14	0.03-0.10	0.0-2.9	0.0-0.5	.10	.15			
		10-60	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L95E:													
Estherville-----	10	0-8	5-15	1.25-1.35	14.11-42.34	0.13-0.18	0.0-2.9	1.5-3.0	.20	.20	3	3	86
		8-13	10-18	1.35-1.60	14.11-42.34	0.13-0.18	0.0-2.9	0.1-0.8	.20	.20			
		13-60	0-8	1.50-1.65	42.34-444.60	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Tomall-----	10	0-33	12-20	1.25-1.40	4.23-14.11	0.20-0.24	0.9-3.2	4.0-9.0	.28	.28	5	5	56
		33-42	10-18	1.40-1.60	4.23-14.11	0.15-0.19	0.9-4.2	0.2-1.0	.28	.28			
		42-47	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.1-0.5	.05	.15			
		47-80	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.0-0.5	.05	.15			
L96B:													
Estherville-----	55	0-13	5-15	1.25-1.35	14.00-42.00	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	86
		13-18	10-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	0.0-0.5	.20	.20			
		18-23	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
		23-60	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Hawick-----	35	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	86
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Tomall-----	8	0-33	12-20	1.25-1.40	4.23-14.11	0.20-0.24	0.9-3.2	4.0-9.0	.28	.28	5	5	56
		33-42	10-18	1.40-1.60	4.23-14.11	0.15-0.19	0.9-4.2	0.2-1.0	.28	.28			
		42-47	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.1-0.5	.05	.15			
		47-80	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.0-0.5	.05	.15			
Biscay-----	2	0-20	18-30	1.20-1.30	4.00-14.00	0.20-0.22	3.0-5.9	4.0-8.0	.28	.28	4	6	48
		20-28	18-30	1.25-1.35	4.00-14.00	0.17-0.19	3.0-5.9	0.5-1.0	.28	.28			
		28-36	10-28	1.35-1.55	14.00-42.00	0.11-0.17	0.0-2.9	0.5-1.0	.28	.32			
		36-60	1-6	1.55-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.05	.10			
L97C:													
Hawick-----	60	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Estherville-----	30	0-13	5-15	1.25-1.35	14.00-42.00	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	86
		13-18	10-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	0.0-0.5	.20	.20			
		18-23	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
		23-60	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Tomall-----	10	0-33	12-20	1.25-1.40	4.23-14.11	0.20-0.24	0.9-3.2	4.0-9.0	.28	.28	5	5	56
		33-42	10-18	1.40-1.60	4.23-14.11	0.15-0.19	0.9-4.2	0.2-1.0	.28	.28			
		42-47	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.1-0.5	.05	.15			
		47-80	2-10	1.40-1.60	42.34-282.29	0.02-0.05	0.1-0.5	0.0-0.5	.05	.15			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind	Wind
									Kw	Kf	T	erodi- bility group	erodi- bility index
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L98A:													
Crippin-----	50	0-15	22-27	1.35-1.40	4.00-14.00	0.20-0.22	0.0-2.9	5.0-6.0	.24	.24	5	4L	86
		15-27	24-30	1.40-1.55	4.00-14.00	0.17-0.19	1.0-4.2	0.8-2.5	.28	.28			
		27-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Nicollet-----	40	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo-----	5	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Clarion-----	5	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L99B:													
Clarion-----	62	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Swanlake-----	25	0-9	18-27	1.35-1.45	4.00-14.00	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	4L	86
		9-43	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		43-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Nicollet-----	10	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Webster-----	3	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L100B:													
Clarion-----	45	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Estherville-----	35	0-13	5-15	1.25-1.35	14.00-42.00	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	86
		13-18	10-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	0.0-0.5	.20	.20			
		18-23	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
		23-60	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L100B:													
Lowleyn-----	5	0-14	10-18	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	3.0-5.0	.20	.20	5	3	86
		14-24	10-18	1.35-1.45	14.00-42.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24			
		24-31	1-10	1.55-1.65	42.00-141.00	0.06-0.11	0.0-2.9	0.0-1.0	.15	.15			
		31-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Nicollet-----	5	0-17	27-35	1.15-1.25	4.00-14.00	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		17-33	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.8-2.0	.32	.32			
		33-36	25-35	1.25-1.35	4.00-14.00	0.15-0.19	3.0-5.9	0.2-0.8	.32	.32			
		36-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Swanlake-----	5	0-9	18-27	1.35-1.45	4.00-14.00	0.20-0.24	0.0-2.9	2.0-4.0	.28	.28	5	4L	86
		9-43	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		43-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Webster-----	5	0-19	26-35	1.35-1.40	4.00-14.00	0.19-0.21	3.0-5.9	4.0-7.0	.24	.24	5	6	48
		19-26	25-35	1.40-1.50	4.00-14.00	0.16-0.18	3.0-5.9	0.8-2.5	.32	.32			
		26-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L101C2:													
Omsrud, eroded-----	40	0-9	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.24	.24	5	6	48
		9-19	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		19-36	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		36-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hawick-----	30	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Storden, eroded-----	20	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	5	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L101D2:													
Omsrud, eroded-----	40	0-9	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.24	.24	5	6	48
		9-19	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		19-36	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		36-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L101D2:													
Hawick-----	25	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Storden, eroded-----	20	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	6	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	5	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	4	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L102C2:													
Omsrud, eroded-----	45	0-9	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.24	.24	5	6	48
		9-19	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		19-36	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		36-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	25	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Omsrud-----	15	0-12	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-16	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		16-32	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		32-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	5	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L102D2: Omsrud, eroded-----	45	0-9	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.24	.24	5	6	48
		9-19	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		19-36	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		36-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	20	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Omsrud-----	15	0-12	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-16	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		16-32	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		32-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	8	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	6	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	6	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L103A: Fieldon-----	50	0-19	15-22	1.25-1.40	4.00-14.00	0.18-0.20	0.0-2.9	5.0-8.0	.28	.28	4	4L	86
		19-37	10-18	1.35-1.55	4.00-14.00	0.15-0.17	0.0-2.9	0.2-0.8	.20	.20			
		37-60	5-15	1.40-1.60	42.00-141.00	0.05-0.07	0.0-2.9	0.0-0.5	.20	.20			
Canisteo-----	35	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Darfur-----	10	0-9	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	5.0-8.0	.20	.20	5	5	56
		9-19	14-18	1.20-1.35	4.00-14.00	0.20-0.22	0.0-2.9	2.0-6.0	.20	.20			
		19-31	13-18	1.35-1.50	14.00-42.00	0.15-0.17	0.0-2.9	0.2-0.8	.20	.20			
		31-60	5-15	1.45-1.60	14.00-42.00	0.08-0.10	0.0-2.9	0.0-0.5	.20	.20			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L103A: Glencoe-----	5	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L105C2: Lester, eroded-----	45	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hawick-----	35	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	5	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	5	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L105D2: Lester, eroded-----	45	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hawick-----	35	0-7	2-10	1.50-1.65	14.11-141.14	0.03-0.13	0.0-2.9	1.0-3.0	.10	.15	5	8	134
		7-80	1-5	1.55-1.65	141.14-282.29	0.02-0.06	0.0-2.9	0.0-0.5	.10	.15			
Ridgeton-----	8	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	5	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
Ll05D2:		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Storden, eroded-----	5	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	2	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ll06C2:													
Lester, eroded-----	62	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	20	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	5	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Reedslake-----	3	0-12	20-26	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-26	22-32	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		26-48	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ll06D2:													
Lester, eroded-----	62	0-7	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		7-38	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	20	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L106D2: Ridgeton-----	10	0-23	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		23-38	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		38-50	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.8-2.5	.32	.32			
		50-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	5	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	3	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L107A: Canisteo-----	50	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe-----	35	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Harps-----	10	0-13	27-35	1.35-1.40	4.23-14.11	0.19-0.21	3.0-5.9	3.0-5.0	.24	.24	5	4L	86
		13-30	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo, depressional-----	3	0-17	27-32	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-8.0	.24	.24	5	4L	86
		17-30	20-35	1.35-1.50	4.00-14.00	0.15-0.19	3.0-5.9	2.0-4.0	.32	.32			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Crippin-----	2	0-15	22-27	1.35-1.40	4.00-14.00	0.20-0.22	0.0-2.9	5.0-6.0	.24	.24	5	4L	86
		15-27	24-30	1.40-1.55	4.00-14.00	0.17-0.19	---	0.8-2.5	.28	.28			
		27-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L108A: Cordova-----	65	0-18	27-30	1.25-1.45	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
		18-38	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	1.0-4.0	.28	.28			
		38-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
L108A:		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
Rolfe-----	30	0-12	22-27	1.35-1.40	4.23-14.11	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	5	6	48
		12-20	22-27	1.40-1.50	4.23-14.11	0.22-0.24	0.0-2.9	1.0-2.0	.28	.28			
		20-35	39-45	1.50-1.60	0.42-1.41	0.11-0.13	6.0-8.9	1.0-2.0	.28	.28			
		35-51	25-35	1.50-1.60	1.41-14.11	0.14-0.16	3.0-5.9	0.0-1.0	.28	.28			
		51-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Le Sueur-----	5	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L109A:													
Marna-----	65	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Barbert-----	30	0-7	18-27	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	4.0-7.0	.28	.28	5	6	48
		7-17	18-27	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	0.2-0.8	.28	.28			
		17-43	45-60	1.20-1.35	0.00-1.00	0.10-0.14	6.0-8.9	1.0-4.0	.28	.28			
		43-60	18-32	1.20-1.60	4.00-14.00	0.22-0.24	0.0-2.9	0.1-0.8	.28	.28			
Guckeen-----	5	0-15	35-40	1.20-1.30	1.41-4.23	0.16-0.19	6.0-8.9	4.0-6.0	.28	.28	5	4	86
		15-24	35-50	1.25-1.35	0.42-4.23	0.13-0.16	6.0-8.9	0.5-1.5	.28	.28			
		24-30	24-40	1.35-1.80	0.42-4.23	0.15-0.17	3.0-5.9	0.2-0.8	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L110E:													
Lester-----	50	0-5	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	4.0-8.0	.28	.28	5	6	48
		5-34	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		34-60	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		60-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	30	0-32	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-8.0	.24	.24	5	6	48
		32-40	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		40-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Cokato-----	10	0-16	22-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.28	.28	5	6	48
		16-30	25-35	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	1.0-2.0	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Belview-----	6	0-9	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.28	.28	5	4L	86
		9-50	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L110E:													
Hamel-----	2	0-22	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		22-41	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		41-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	2	0-24	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		24-37	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		37-57	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		57-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L110F:													
Lester-----	55	0-6	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	4.0-8.0	.28	.28	5	6	48
		6-25	24-32	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		25-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Ridgeton-----	30	0-32	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-8.0	.24	.24	5	6	48
		32-40	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		40-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Cokato-----	8	0-16	22-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-8.0	.28	.28	5	6	48
		16-30	25-35	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	1.0-2.0	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Belview-----	4	0-9	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	3.0-8.0	.28	.28	5	4L	86
		9-50	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	2	0-24	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		24-37	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		37-57	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		57-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	1	0-22	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		22-41	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		41-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L111A:													
Nicollet-----	85	0-10	27-35	1.15-1.25	4.23-14.11	0.17-0.22	3.0-5.9	4.0-8.0	.24	.24	5	7	38
		10-31	25-35	1.25-1.35	4.23-14.11	0.15-0.19	3.0-5.9	1.0-2.0	.32	.32			
		31-42	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		42-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Clarion-----	10	0-14	20-27	1.30-1.55	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		14-33	23-30	1.30-1.55	4.00-14.00	0.17-0.19	---	0.5-1.0	.37	.37			
		33-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
L111A: Webster-----	5	In 0-24 24-45 45-80	Pct 26-35 25-35 20-30	g/cc 1.35-1.40 1.40-1.50 1.35-1.55	um/sec 4.00-14.00 4.00-14.00 4.00-14.00	In/in 0.19-0.21 0.16-0.18 0.15-0.19	Pct 3.0-5.9 3.0-5.9 1.0-4.2	Pct --- 0.8-2.5 0.1-0.5	.24 .32 .32	.24 .32 .37	5	6	48
L112A: Webster-----	85	0-24 24-45 45-80	26-35 25-35 20-30	1.35-1.40 1.40-1.50 1.35-1.55	4.00-14.00 4.00-14.00 4.00-14.00	0.19-0.21 0.16-0.18 0.15-0.19	3.0-5.9 3.0-5.9 1.0-4.2	4.0-7.0 0.8-2.5 0.1-0.5	.24 .32 .32	.24 .32 .37	5	6	48
Glencoe-----	10	0-10 10-35 35-48 48-60	27-35 25-35 25-35 20-30	1.35-1.45 1.35-1.45 1.35-1.50 1.35-1.55	1.00-14.00 1.00-14.00 1.00-14.00 4.00-14.00	0.18-0.22 0.18-0.22 0.15-0.19 0.15-0.19	3.0-5.9 3.0-5.9 3.0-5.9 1.0-4.2	5.0-10 2.0-5.0 0.5-2.0 0.1-0.5	.28 .28 .28 .32	.28 .28 .28 .37	5	6	48
Nicollet-----	5	0-10 10-31 31-42 42-80	27-35 25-35 20-30 20-30	1.15-1.25 1.25-1.35 1.35-1.55 1.35-1.55	4.23-14.11 4.23-14.11 4.00-14.00 4.00-14.00	0.17-0.22 0.15-0.19 0.15-0.19 0.15-0.19	3.0-5.9 3.0-5.9 1.0-4.2 1.0-4.2	4.0-8.0 1.0-2.0 0.5-1.0 0.1-0.5	.24 .32 .32 .32	.24 .32 .32 .37	5	7	38
L113B: Reedslake-----	75	0-12 12-26 26-48 48-80	20-26 22-32 20-30 20-30	1.30-1.40 1.40-1.50 1.35-1.55 1.35-1.55	4.23-14.11 4.23-14.11 4.00-14.00 4.00-14.00	0.20-0.22 0.15-0.19 0.15-0.19 0.15-0.19	0.0-2.9 3.0-5.9 1.0-4.2 1.0-4.2	3.0-5.0 0.5-2.0 0.1-0.5 0.1-0.5	.24 .32 .32 .32	.24 .32 .37 .37	5	6	48
Le Sueur-----	10	0-17 17-37 37-46 46-80	28-30 24-35 20-30 20-30	1.50-1.70 1.30-1.45 1.35-1.55 1.35-1.55	4.23-14.11 4.23-14.11 4.00-14.00 4.00-14.00	0.17-0.20 0.15-0.19 0.15-0.19 0.15-0.19	3.0-5.9 3.0-5.9 1.0-4.2 1.0-4.2	3.0-7.0 0.5-2.0 0.1-0.5 0.1-0.5	.24 .32 .32 .32	.24 .32 .37 .37	5	6	48
Reedslake, eroded----	10	0-12 12-26 26-48 48-80	20-26 22-32 20-30 20-30	1.30-1.40 1.40-1.50 1.35-1.55 1.35-1.55	4.23-14.11 4.23-14.11 4.00-14.00 4.00-14.00	0.20-0.22 0.15-0.19 0.15-0.19 0.15-0.19	0.0-2.9 3.0-5.9 1.0-4.2 1.0-4.2	1.0-3.0 0.5-2.0 0.1-0.5 0.1-0.5	.24 .32 .32 .32	.24 .32 .37 .37	5	6	48
Cordova-----	5	0-18 18-38 38-80	27-30 28-35 20-30	1.25-1.45 1.35-1.50 1.35-1.55	1.41-4.23 1.41-4.23 4.00-14.00	0.18-0.22 0.15-0.19 0.15-0.19	3.0-5.9 3.0-5.9 1.0-4.2	4.0-7.0 1.0-4.0 0.1-0.5	.28 .28 .32	.28 .28 .37	5	6	48
L114A: Hanlon, rarely flooded-----	85	0-24 24-52 52-57 57-80	12-18 12-18 5-10 2-18	1.45-1.55 1.45-1.55 1.55-1.70 1.55-1.70	14.11-42.34 14.11-42.34 14.11-42.34 14.11-42.34	0.16-0.18 0.16-0.18 0.11-0.13 0.12-0.19	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	2.0-3.0 1.0-2.0 1.0-2.0 0.0-1.0	.20 .20 .20 .24	.20 .20 .20 .24	5	3	86

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L114A: Coland, occasionally flooded-----	10	0-25	27-35	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	5.0-7.0	.24	.24	5	7	38
		25-54	22-28	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	2.0-5.0	.24	.24			
		54-60	12-26	1.50-1.65	4.00-42.00	0.13-0.17	0.0-2.9	0.2-0.8	.28	.28			
Minneopa, rarely flooded-----	5	0-15	5-15	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	3.0-5.0	.20	.20	4	3	86
		15-20	5-15	1.40-1.60	14.00-42.00	0.07-0.11	0.0-2.9	0.5-1.0	.20	.20			
		20-60	1-10	1.50-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.15	.15			
L115A: Brownton-----	55	0-22	35-40	1.20-1.30	0.00-1.00	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		22-38	35-60	1.20-1.30	0.00-1.00	0.13-0.16	6.0-8.9	0.2-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lura-----	35	0-10	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	4.0-12	.28	.28	5	4	86
		10-58	45-60	1.25-1.35	0.00-1.00	0.14-0.17	6.0-8.9	1.0-4.0	.32	.32			
		58-72	28-60	1.30-1.45	0.00-4.00	0.11-0.19	6.0-8.9	0.0-1.0	.32	.32			
Marna-----	10	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L116A: Le Sueur-----	45	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lerdal-----	40	0-8	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	2.0-4.0	.37	.37	5	7	38
		8-12	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	0.2-1.5	.37	.37			
		12-41	35-55	1.25-1.35	0.00-1.00	0.13-0.19	6.0-8.9	0.2-0.8	.32	.32			
		41-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Mazaska-----	10	0-15	27-40	1.15-1.30	1.41-4.23	0.17-0.22	6.0-8.9	4.0-7.0	.28	.28	5	7	38
		15-42	35-50	1.25-1.40	0.42-1.41	0.10-0.16	6.0-8.9	0.5-2.0	.28	.28			
		42-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Kilkenny-----	5	0-11	27-30	1.15-1.25	1.41-4.23	0.17-0.19	3.0-5.9	2.0-4.0	.28	.28	5	6	48
		11-35	35-45	1.25-1.35	1.41-4.23	0.15-0.19	3.0-5.9	0.2-1.0	.28	.28			
		35-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L117C2:													
Omsrud, eroded-----	65	0-9	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.24	.24	5	6	48
		9-19	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		19-36	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		36-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Omsrud-----	15	0-12	20-26	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-16	22-30	1.35-1.50	4.23-14.11	0.17-0.19	0.0-2.9	0.5-2.0	.32	.32			
		16-32	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		32-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Terril-----	10	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	5	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Storden, eroded-----	5	0-7	18-27	1.35-1.45	4.23-14.11	0.20-0.22	0.0-2.9	1.0-2.0	.28	.28	5	4L	86
		7-55	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		55-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L118A:													
Rushriver, frequently flooded-----	85	0-41	5-18	1.40-1.60	14.11-42.34	0.11-0.17	0.0-2.9	1.0-4.0	.24	.24	5	3	86
		41-80	2-10	1.55-1.65	14.11-141.14	0.06-0.15	0.0-2.9	0.5-2.0	.17	.17			
Houghton, frequently flooded-----	5	0-60	0-0	0.20-0.35	1.41-42.34	0.35-0.45	---	70-99	---	---	2	2	134
Klossner, frequently flooded-----	5	0-22	---	0.25-0.55	1.00-42.00	0.35-0.48	---	25-60	---	---	2	2	134
		22-45	22-35	1.10-1.25	4.00-14.00	0.22-0.26	3.0-5.9	10-20	.37	.37			
		45-60	15-32	1.30-1.40	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28			
Medo, frequently flooded-----	5	0-25	---	0.25-0.45	1.00-42.00	0.35-0.45	---	20-50	---	---	2	2	134
		25-31	15-30	1.15-1.65	4.00-42.00	0.13-0.20	3.0-5.9	5.0-10	.24	.24			
		31-45	15-30	1.15-1.65	4.00-42.00	0.13-0.20	3.0-5.9	0.8-3.0	.24	.24			
		45-80	0-10	1.50-1.65	14.00-141.00	0.03-0.10	0.0-2.9	0.5-2.0	.10	.10			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L119B:													
Angus-----	80	0-8	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	2.0-4.0	.28	.28	5	6	48
		8-35	24-35	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		35-40	24-35	1.55-1.75	4.23-14.11	0.14-0.19	0.0-2.9	0.0-0.5	.37	.37			
		40-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Angus, eroded-----	10	0-8	20-27	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	6	48
		8-40	24-35	1.45-1.55	4.23-14.11	0.15-0.19	3.0-5.9	0.5-1.0	.28	.28			
		40-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Cordova-----	5	0-18	27-30	1.25-1.45	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
		18-38	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	1.0-4.0	.28	.28			
		38-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Le Sueur-----	5	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L120A:													
Good Thunder-----	80	0-15	30-40	1.20-1.40	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	4	86
		15-32	36-55	1.20-1.35	0.42-4.23	0.13-0.16	6.0-8.9	1.0-3.0	.32	.32			
		32-80	18-32	1.25-1.35	4.23-14.11	0.16-0.20	0.0-2.9	0.0-1.0	.37	.37			
Ocheyedan-----	10	0-10	24-27	1.40-1.45	4.00-14.00	0.20-0.22	0.0-2.9	3.0-6.0	.24	.24	5	6	48
		10-30	14-24	1.45-1.60	4.00-14.00	0.16-0.18	0.0-2.9	0.5-1.0	.32	.32			
		30-60	12-24	1.45-1.70	4.00-14.00	0.19-0.21	0.0-2.9	0.1-0.5	.43	.43			
Minnetonka-----	10	0-13	27-35	1.20-1.40	1.41-4.23	0.18-0.22	3.0-5.9	4.0-8.0	.28	.28	5	7	38
		13-35	35-60	1.20-1.35	0.42-1.41	0.13-0.19	6.0-8.9	0.2-1.0	.28	.28			
		35-60	25-40	1.25-1.55	1.41-14.11	0.16-0.21	3.0-5.9	0.0-0.2	.28	.28			
L121B:													
Clarion-----	80	0-13	27-33	1.30-1.55	4.00-14.00	0.20-0.22	3.0-5.0	3.0-6.0	.24	.24	5	6	48
		13-37	27-33	1.30-1.55	4.00-14.00	0.17-0.19	3.0-5.0	0.5-1.0	.37	.37			
		37-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Guckeen-----	15	0-15	35-40	1.20-1.30	1.41-4.23	0.16-0.19	6.0-8.9	4.0-6.0	.28	.28	5	4	86
		15-24	35-50	1.25-1.35	0.42-4.23	0.13-0.16	6.0-8.9	0.5-1.5	.28	.28			
		24-30	24-40	1.35-1.80	0.42-4.23	0.15-0.17	3.0-5.9	0.2-0.8	.37	.37			
		30-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L121B: Marna-----	5	0-20	35-50	1.20-1.30	0.42-1.41	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		20-32	35-60	1.25-1.40	0.42-1.41	0.13-0.16	6.0-8.9	0.5-1.0	.32	.32			
		32-41	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	0.2-0.8	.28	.28			
		41-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L122B: Reedslake-----	55	0-12	20-26	1.30-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		12-26	22-32	1.40-1.50	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		26-48	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Estherville-----	25	0-13	5-15	1.25-1.35	14.00-42.00	0.13-0.18	0.0-2.9	2.0-4.0	.20	.20	3	3	86
		13-18	10-18	1.35-1.60	14.00-42.00	0.13-0.18	0.0-2.9	0.0-0.5	.20	.20			
		18-23	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
		23-60	0-8	1.50-1.65	42.00-141.00	0.02-0.04	0.0-2.9	0.0-0.5	.10	.10			
Le Sueur-----	10	0-17	28-30	1.50-1.70	4.23-14.11	0.17-0.20	3.0-5.9	3.0-7.0	.24	.24	5	6	48
		17-37	24-35	1.30-1.45	4.23-14.11	0.15-0.19	3.0-5.9	0.5-2.0	.32	.32			
		37-46	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
		46-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Cordova-----	5	0-18	27-30	1.25-1.45	1.41-4.23	0.18-0.22	3.0-5.9	4.0-7.0	.28	.28	5	6	48
		18-38	28-35	1.35-1.50	1.41-4.23	0.15-0.19	3.0-5.9	1.0-4.0	.28	.28			
		38-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lowlein-----	5	0-14	10-18	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	3.0-5.0	.20	.20	5	3	86
		14-24	10-18	1.35-1.45	14.00-42.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24			
		24-31	1-10	1.55-1.65	42.00-141.00	0.06-0.11	0.0-2.9	0.0-1.0	.15	.15			
		31-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L123A: Belleville-----	85	0-11	12-18	1.30-1.50	14.11-42.34	0.13-0.18	0.0-2.9	3.0-6.0	.20	.20	3	3	86
		11-27	2-12	1.40-1.55	42.34-141.14	0.04-0.12	0.0-2.9	0.1-0.5	.17	.17			
		27-48	20-30	1.45-1.70	1.41-4.23	0.12-0.20	3.0-5.9	0.1-0.5	.32	.32			
		48-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Granby-----	15	0-12	2-14	1.20-1.60	42.34-141.14	0.10-0.12	0.0-2.9	4.0-10	.17	.17	5	2	134
		12-24	0-14	1.45-1.60	42.34-141.14	0.05-0.12	0.0-2.9	---	.17	.17			
		24-60	0-10	1.45-1.60	42.34-141.14	0.05-0.09	0.0-2.9	---	.17	.17			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L124A:													
Glencoe mucky clay loam-----	85	0-10	20-30	1.20-1.25	4.00-14.00	0.22-0.25	3.0-5.9	10-18	.32	.32	5	6	48
		10-29	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		29-42	20-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		42-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Canisteo-----	10	0-18	27-35	1.25-1.35	4.00-14.00	0.18-0.22	3.0-5.9	4.0-7.0	.24	.24	5	4L	86
		18-39	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.5-1.0	.32	.32			
		39-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Glencoe clay loam----	5	0-10	27-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	5.0-10	.28	.28	5	6	48
		10-35	25-35	1.35-1.45	1.00-14.00	0.18-0.22	3.0-5.9	2.0-5.0	.28	.28			
		35-48	25-35	1.35-1.50	1.00-14.00	0.15-0.19	3.0-5.9	0.5-2.0	.28	.28			
		48-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L125A:													
Hanlon, rarely flooded-----	60	0-24	12-18	1.45-1.55	14.11-42.34	0.16-0.18	0.0-2.9	2.0-3.0	.20	.20	5	3	86
		24-52	12-18	1.45-1.55	14.11-42.34	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20			
		52-57	5-10	1.55-1.70	14.11-42.34	0.11-0.13	0.0-2.9	1.0-2.0	.20	.20			
		57-80	2-18	1.55-1.70	14.11-42.34	0.12-0.19	0.0-2.9	0.0-1.0	.24	.24			
Coland, occasionally flooded-----	25	0-25	27-35	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	5.0-7.0	.24	.24	5	7	38
		25-54	22-28	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	2.0-5.0	.24	.24			
		54-60	12-26	1.50-1.65	4.00-42.00	0.13-0.17	0.0-2.9	0.2-0.8	.28	.28			
Minneopa, rarely flooded-----	15	0-15	5-15	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	3.0-5.0	.20	.20	4	3	86
		15-20	5-15	1.40-1.60	14.00-42.00	0.07-0.11	0.0-2.9	0.5-1.0	.20	.20			
		20-60	1-10	1.50-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.15	.15			
L126A:													
Coland, occasionally flooded-----	80	0-25	27-35	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	5.0-7.0	.24	.24	5	7	38
		25-54	22-28	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	2.0-5.0	.24	.24			
		54-60	12-26	1.50-1.65	4.00-42.00	0.13-0.17	0.0-2.9	0.2-0.8	.28	.28			
Minneopa, occasionally flooded	10	0-15	5-15	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	3.0-5.0	.20	.20	4	3	86
		15-20	5-15	1.40-1.60	14.00-42.00	0.07-0.11	0.0-2.9	0.5-1.0	.20	.20			
		20-60	1-10	1.50-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.15	.15			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L126A: Havelock, occasionally flooded	5	0-23	27-35	1.40-1.50	4.23-14.11	0.20-0.22	6.0-8.9	5.0-7.0	.24	.24	5	4L	86
		23-35	27-35	1.40-1.50	4.23-14.11	0.20-0.22	6.0-8.9	1.0-2.0	.28	.28			
		35-60	12-28	1.50-1.65	14.11-42.34	0.13-0.17	0.0-2.9	0.0-0.5	.28	.28			
Spillville, occasionally flooded	5	0-51	18-26	1.45-1.55	4.00-14.00	0.19-0.21	3.0-5.9	4.0-6.0	.24	.24	5	6	48
		51-60	14-24	1.55-1.70	4.00-42.00	0.15-0.18	0.0-2.9	2.0-3.0	.28	.28			
L127A: Coland, frequently flooded-----	80	0-12	27-35	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	5.0-7.0	.24	.24	5	6	48
		12-30	22-35	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	4.0-6.0	.24	.24			
		30-55	14-28	1.40-1.50	4.00-14.00	0.20-0.22	3.0-5.9	2.0-5.0	.24	.24			
		55-80	12-26	1.50-1.65	4.00-42.00	0.13-0.17	0.0-2.9	0.5-3.0	.28	.28			
Minneopa, occasionally flooded	10	0-16	5-15	1.30-1.50	14.00-42.00	0.13-0.15	0.0-2.9	2.0-5.0	.20	.20	4	3	86
		16-29	5-10	1.40-1.60	14.00-42.00	0.07-0.11	0.0-2.9	0.5-1.0	.20	.20			
		29-60	1-10	1.50-1.70	42.00-141.00	0.04-0.09	0.0-2.9	0.1-0.5	.15	.15			
Havelock, frequently flooded-----	5	0-30	14-30	1.40-1.50	4.23-14.11	0.20-0.22	6.0-8.9	3.0-7.0	.24	.24	5	4L	86
		30-40	22-35	1.40-1.50	4.23-14.11	0.20-0.22	6.0-8.9	1.0-3.0	.28	.28			
		40-60	18-35	1.50-1.65	14.11-42.34	0.13-0.17	0.0-2.9	0.5-2.5	.28	.28			
Spillville, occasionally flooded	5	0-51	18-26	1.45-1.55	4.00-14.00	0.19-0.21	3.0-5.9	4.0-6.0	.24	.24	5	6	48
		51-60	14-24	1.55-1.70	4.00-42.00	0.15-0.18	0.0-2.9	2.0-3.0	.28	.28			
L128A: Mazaska-----	60	0-15	27-40	1.15-1.30	1.41-4.23	0.17-0.22	6.0-8.9	4.0-7.0	.28	.28	5	7	38
		15-42	35-50	1.25-1.40	0.42-1.41	0.10-0.16	6.0-8.9	0.5-2.0	.28	.28			
		42-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Rolfe-----	30	0-12	22-27	1.35-1.40	4.23-14.11	0.22-0.24	0.0-2.9	3.0-5.0	.37	.37	5	6	48
		12-20	22-27	1.40-1.50	4.23-14.11	0.22-0.24	0.0-2.9	1.0-2.0	.28	.28			
		20-35	39-45	1.50-1.60	0.42-1.41	0.11-0.13	6.0-8.9	1.0-2.0	.28	.28			
		35-51	25-35	1.50-1.60	1.41-14.11	0.14-0.16	3.0-5.9	0.0-1.0	.28	.28			
		51-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Lerdal-----	10	0-8	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	2.0-4.0	.37	.37	5	7	38
		8-12	27-32	1.15-1.25	1.00-14.00	0.18-0.22	3.0-5.9	0.2-1.5	.37	.37			
		12-41	35-55	1.25-1.35	0.00-1.00	0.13-0.19	6.0-8.9	0.2-0.8	.32	.32			
		41-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			

Table 15.--Physical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
									Kw	Kf	T		
		In	Pct	g/cc	um/sec	In/in	Pct	Pct					
L129B:													
Terril-----	90	0-27	18-26	1.35-1.40	4.23-14.11	0.20-0.22	0.0-2.9	3.0-5.0	.24	.24	5	6	48
		27-40	24-30	1.40-1.45	4.23-14.11	0.17-0.19	0.0-2.9	2.0-4.0	.28	.28			
		40-63	22-30	1.45-1.70	4.23-14.11	0.16-0.18	0.0-2.9	0.0-1.0	.32	.32			
		63-80	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Delft-----	5	0-37	25-35	1.40-1.65	1.00-4.00	0.18-0.20	3.0-5.9	4.0-8.0	.24	.24	5	6	48
		37-50	20-32	1.30-1.40	4.00-14.00	0.19-0.22	0.0-2.9	0.5-2.0	.32	.32			
		50-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Hamel-----	5	0-24	20-27	1.30-1.40	4.23-14.11	0.20-0.24	0.0-2.9	5.0-7.0	.28	.28	5	6	48
		24-46	24-35	1.45-1.60	1.41-4.23	0.16-0.19	3.0-5.9	1.0-4.0	.28	.28			
		46-80	20-30	1.35-1.55	4.23-14.11	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
L130A:													
Okoboji mucky silty clay loam-----	75	0-13	28-35	1.20-1.25	4.23-14.11	0.22-0.25	3.0-5.9	10-18	.32	.32	5	6	48
		13-35	35-45	1.30-1.40	1.41-4.23	0.18-0.20	6.0-8.9	7.0-10	.32	.32			
		35-60	25-35	1.35-1.40	1.41-4.23	0.18-0.20	6.0-8.9	0.5-1.5	.32	.32			
Okoboji silty clay loam-----	15	0-26	35-42	1.30-1.40	1.00-4.00	0.21-0.23	6.0-8.9	5.0-10	.32	.32	5	4	86
		26-42	35-50	1.30-1.40	1.00-4.00	0.18-0.20	6.0-8.9	0.5-2.0	.32	.32			
		42-60	25-35	1.35-1.40	1.00-4.00	0.18-0.20	6.0-8.9	0.2-0.8	.32	.32			
Brownton-----	5	0-22	35-40	1.20-1.30	0.00-1.00	0.18-0.22	6.0-8.9	4.0-8.0	.28	.28	5	4	86
		22-38	35-60	1.20-1.30	0.00-1.00	0.13-0.16	6.0-8.9	0.2-1.0	.28	.28			
		38-60	20-30	1.35-1.55	4.00-14.00	0.15-0.19	1.0-4.2	0.1-0.5	.32	.37			
Spicer-----	5	0-16	29-35	1.20-1.30	4.00-14.00	0.18-0.24	3.0-5.9	4.0-8.0	.28	.28	5	4L	86
		16-40	18-35	1.25-1.35	4.00-14.00	0.16-0.22	3.0-5.9	0.8-2.0	.37	.37			
		40-60	18-35	1.25-1.35	4.00-14.00	0.16-0.22	0.0-2.9	0.1-0.8	.37	.37			
M-W. Water, miscellaneous													
U3B. Udorthents (cut and fill land)													
W. Water													

Table 16.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
GP:						
Pits, gravel-----	80	---	---	---	---	---
Udipsamments-----	20	---	---	---	---	---
L5A:						
Delft, overwash-----	50	0-12	---	5.6-7.8	---	---
		12-37	---	5.6-7.8	---	---
		37-47	---	6.6-7.8	---	---
		47-80	10-20	7.4-8.4	10-20	0-1
Delft-----	40	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
Glencoe-----	5	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
L13A:						
Klossner, drained----	80	0-26	50-150	5.6-7.4	0-5	---
		26-36	35-65	6.1-7.4	0-5	---
		36-48	20-40	6.1-7.4	0-5	---
		48-80	5.0-25	6.1-8.4	0-20	0-1
Mineral soil, drained	15	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1
Houghton, drained----	5	0-10	100-200	4.5-7.3	---	---
		10-80	100-200	4.5-7.3	---	---
L14A:						
Houghton, drained----	80	0-10	100-200	4.5-7.3	---	---
		10-80	100-200	4.5-7.3	---	---
Klossner, drained----	10	0-26	50-150	5.6-7.4	0-5	---
		26-36	35-65	6.1-7.4	0-5	---
		36-48	20-40	6.1-7.4	0-5	---
		48-80	5.0-25	6.1-8.4	0-20	0-1
Mineral soil, drained	10	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L15A:						
Klossner, ponded-----	30	0-26	50-150	5.6-7.4	0-5	---
		26-33	35-65	6.1-7.4	0-5	---
		33-40	20-40	6.1-7.4	0-5	---
		40-80	5.0-25	6.1-8.4	0-20	0-1
Okoboji, ponded-----	30	0-10	41-50	6.1-7.8	0-15	---
		10-52	41-45	6.6-7.8	0-15	---
		52-60	36-41	6.6-7.8	0-30	---
Glencoe, ponded-----	30	0-42	20-40	6.1-7.8	0-5	---
		42-50	15-30	6.6-7.8	0-5	---
		50-60	10-20	7.4-8.4	10-20	0-1
Houghton, ponded-----	10	0-80	100-200	4.5-7.3	---	---
L16A:						
Muskego, ponded-----	30	0-9	140-180	5.6-7.3	---	---
		9-36	150-190	5.6-7.3	---	---
		36-60	10-45	6.6-8.4	60-80	---
Blue Earth, ponded---	30	0-50	30-70	7.4-8.4	5-20	---
		50-60	30-70	7.4-8.4	5-40	---
Houghton, ponded-----	30	0-80	100-200	4.5-7.3	---	---
Klossner, ponded-----	10	0-26	50-150	5.6-7.4	0-5	---
		26-33	35-65	6.1-7.4	0-5	---
		33-40	20-40	6.1-7.4	0-5	---
		40-80	5.0-25	6.1-8.4	0-20	0-1
L26B:						
Shorewood-----	90	0-17	30-45	5.6-7.3	0	0
		17-39	25-45	5.1-7.3	0	0
		39-60	10-20	7.4-8.4	10-20	0-1
Good Thunder-----	5	0-15	30-45	5.6-7.3	0	0
		15-32	25-45	5.1-7.3	0	0
		32-80	15-25	7.4-8.4	10-20	0
Minnetonka-----	5	0-13	24-43	5.6-7.3	---	---
		13-35	21-47	5.6-7.3	---	---
		35-60	15-32	6.6-7.8	5-20	---
L36A:						
Hamel, overwash-----	50	0-13	15-30	5.6-7.3	---	---
		13-29	15-30	5.6-7.3	---	---
		29-50	15-30	5.6-7.3	---	---
		50-80	10-20	7.4-8.4	10-20	0-1
Hamel-----	43	0-24	15-30	5.6-7.3	---	---
		24-46	15-30	5.6-7.3	---	---
		46-80	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	---	---
		27-40	20-25	6.1-7.3	---	---
		40-63	15-25	6.1-7.3	---	---
		63-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L36A:						
Glencoe-----	2	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1
L40B:						
Angus-----	45	0-8	10-24	5.6-7.3	---	---
		8-35	10-23	5.1-7.3	---	---
		35-40	8.0-18	6.1-7.8	5-20	---
		40-80	10-20	7.4-8.4	10-20	0-1
Kilkenny-----	40	0-11	20-30	5.6-7.3	---	---
		11-35	25-35	5.1-7.3	---	---
		35-80	10-20	7.4-8.4	10-20	0-1
Lerdal-----	10	0-8	18-24	5.6-6.5	0	0
		8-12	18-24	5.6-6.5	0	0
		12-41	19-30	4.5-6.0	0	0
		41-80	10-20	7.4-8.4	15-25	0-1
Mazaska-----	5	0-15	22-34	6.1-7.3	---	---
		15-42	19-29	4.5-6.5	---	---
		42-80	10-20	7.4-8.4	15-25	0-1
L41C2:						
Lester, eroded-----	45	0-7	10-24	5.6-7.3	---	---
		7-38	10-23	5.1-7.3	---	---
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Kilkenny, eroded-----	40	0-9	20-30	5.6-7.3	---	---
		9-53	25-35	5.1-7.3	---	---
		53-80	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	---	---
		27-40	20-25	6.1-7.3	---	---
		40-63	15-25	6.1-7.3	---	---
		63-80	10-20	7.4-8.4	10-20	0-1
Derrynane-----	5	0-19	25-40	6.1-7.3	---	---
		19-39	25-45	6.1-7.3	---	---
		39-65	20-30	6.1-7.3	---	---
		65-80	10-20	7.4-8.4	10-20	0-1
L41D2:						
Lester, eroded-----	45	0-7	10-24	5.6-7.3	---	---
		7-38	10-23	5.1-7.3	---	---
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Kilkenny, eroded-----	35	0-9	20-30	5.6-7.3	---	---
		9-53	25-35	5.1-7.3	---	---
		53-80	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	---	---
		27-40	20-25	6.1-7.3	---	---
		40-63	15-25	6.1-7.3	---	---
		63-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L41D2:						
Derrynane-----	5	0-19	25-40	6.1-7.3	---	---
		19-39	25-45	6.1-7.3	---	---
		39-65	20-30	6.1-7.3	---	---
		65-80	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	5	0-23	20-25	6.1-7.3	0	0
		23-38	20-25	6.1-7.3	0	0
		38-50	15-25	6.1-7.3	0	0
		50-80	10-20	7.4-8.4	10-20	0-1
L41E:						
Lester-----	45	0-5	10-24	5.6-7.3	---	---
		5-34	10-23	5.1-7.3	---	---
		34-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Kilkenny-----	40	0-7	20-30	5.6-7.3	---	---
		7-31	25-35	5.1-7.3	---	---
		31-80	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-24	20-25	6.1-7.3	---	---
		24-37	20-25	6.1-7.3	---	---
		37-57	15-25	6.1-7.3	---	---
		57-80	10-20	7.4-8.4	10-20	0-1
Derrynane-----	5	0-20	25-40	6.1-7.3	---	---
		20-40	25-45	6.1-7.3	---	---
		40-54	20-30	6.1-7.3	---	---
		54-80	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	5	0-32	20-25	6.1-7.3	0	0
		32-40	15-25	6.1-7.3	0	0
		40-80	10-20	7.4-8.4	10-20	0-1
L48A:						
Derrynane, overwash--	50	0-16	25-40	6.1-7.3	0	0
		16-48	25-45	6.1-7.3	0	0
		48-67	20-30	6.1-7.3	0	0
		67-80	10-20	7.4-8.4	10-20	0-1
Derrynane-----	40	0-19	25-40	6.1-7.3	---	---
		19-39	25-45	6.1-7.3	---	---
		39-65	20-30	6.1-7.3	---	---
		65-80	10-20	7.4-8.4	10-20	0-1
Glencoe-----	5	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
L49A:						
Klossner, surface drained-----	65	0-26	50-150	5.6-7.4	0-5	---
		26-33	35-65	6.1-7.4	0-5	---
		33-40	20-40	6.1-7.4	0-5	---
		40-80	5.0-25	6.1-8.4	0-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L49A:						
Klossner, drained----	20	0-26	50-150	5.6-7.4	0-5	---
		26-36	35-65	6.1-7.4	0-5	---
		36-48	20-40	6.1-7.4	0-5	---
		48-80	5.0-25	6.1-8.4	0-20	0-1
Mineral soil, drained	15	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1
L50A:						
Houghton, surface drained-----	40	0-80	100-200	4.5-7.3	---	---
Muskego, surface drained-----	40	0-9	140-180	5.6-7.3	---	---
		9-36	150-190	5.6-7.3	---	---
		36-60	10-45	6.6-8.4	60-80	---
Klossner, drained----	10	0-26	50-150	5.6-7.4	0-5	---
		26-36	35-65	6.1-7.4	0-5	---
		36-48	20-40	6.1-7.4	0-5	---
		48-80	5.0-25	6.1-8.4	0-20	0-1
Mineral soil, drained	10	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1
L51C2:						
Gladek, eroded-----	80	0-10	15-24	6.1-7.3	0	0
		10-39	15-22	6.1-7.3	0	0
		39-80	7.0-24	7.4-8.4	10-30	0
Barrington-----	10	0-15	18-26	5.6-7.3	0	0
		15-33	16-25	5.6-7.8	0-10	0
		33-60	4.0-17	6.1-8.4	0-30	0
Lester, eroded-----	5	0-7	10-24	5.6-7.3	0	0
		7-38	10-23	5.1-7.3	0	0
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Madelia-----	5	0-19	27-40	6.1-7.3	0	0
		19-37	17-32	6.6-7.8	0	0
		37-60	15-28	7.4-8.4	5-20	0
L56A:						
Muskego, frequently flooded-----	45	0-9	140-180	5.6-7.3	---	---
		9-36	150-190	5.6-7.3	---	---
		36-60	10-45	6.6-8.4	60-80	---
Klossner, frequently flooded-----	45	0-26	50-150	5.6-7.4	0-5	---
		26-33	35-65	6.1-7.4	0-5	---
		33-40	20-40	6.1-7.4	0-5	---
		40-80	5.0-25	6.1-8.4	0-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
L56A: Suckercreek, frequently flooded--	10	0-22 22-80	10-20 1.0-10	7.4-8.4 7.4-8.4	5-20 5-25	--- ---
L57A: Medo, drained-----	80	0-27 27-35 35-39 39-80	40-100 20-55 20-55 1.0-9.0	6.1-7.8 6.1-7.8 6.1-7.8 6.1-8.4	0-5 0-5 0-5 0-15	--- --- --- ---
Mineral soil, drained	15	0-23 23-31 31-60	10-40 3.0-10 1.0-5.0	5.6-7.3 5.6-7.3 6.1-7.8	--- --- 0-5	--- --- ---
Houghton, drained----	5	0-10 10-80	100-200 100-200	4.5-7.3 4.5-7.3	--- ---	--- ---
L63A: Klossner-----	85	0-25 25-40 40-80	50-150 20-40 20-40	5.6-7.8 6.1-7.8 6.6-7.8	0-5 0-5 0-5	0 0 0
Lura-----	10	0-10 10-58 58-72	35-70 29-54 17-47	6.1-7.8 6.1-7.3 6.6-7.8	0-5 0 10-20	0 0 0
Brownnton-----	5	0-22 22-38 38-60	--- --- 10-20	7.4-8.4 7.4-8.4 7.4-8.4	--- --- 10-20	--- --- 0-1
L64A: Tadkee-----	50	0-6 6-34 34-80	5.0-20 1.0-10 10-20	6.1-7.8 6.1-7.8 7.4-8.4	--- --- 10-20	--- --- 0-1
Tadkee, depressional	36	0-6 6-27 27-80	30-70 1.0-10 10-20	6.1-7.8 6.1-7.8 7.4-8.4	--- --- 10-20	--- --- 0-1
Better drained soil--	8	0-6 6-25 25-80	3.0-8.0 2.0-6.0 10-20	6.1-7.3 5.6-7.3 7.4-8.4	0 0 10-20	0 0 0-1
Granby-----	4	0-12 12-24 24-60	5.0-20 1.0-10 1.0-3.0	5.6-7.3 5.6-7.8 6.6-8.4	--- --- 0-20	--- --- ---
Less sandy soil-----	2	0-4 4-20 20-80	5.0-20 10-20 10-20	7.4-7.8 7.4-8.4 7.4-8.4	5-15 10-20 10-20	0 0-1 0-1
L73A: Blue Earth-----	80	0-10 10-68 68-80	30-70 30-70 10-20	7.4-8.4 7.4-8.4 7.4-8.4	5-20 5-40 10-20	0 0 0-1
Belleville-----	10	0-11 11-27 27-48 48-80	8.0-29 3.0-8.0 10-20 10-20	6.1-7.3 6.1-7.3 6.1-7.3 7.4-8.4	0 0 0 10-20	0 0 0 0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L73A:						
Canisteo-----	10	0-18	19-37	7.4-8.4	5-15	0
		18-39	6.0-23	7.4-8.4	10-15	0
		39-80	10-20	7.4-8.4	15-25	0-1
L74A:						
Estherville-----	87	0-13	2.0-20	5.6-7.3	0	0
		13-18	4.0-20	5.6-7.3	0	0
		18-23	0.0-5.0	5.6-7.3	0	0
		23-60	0.0-5.0	6.6-8.4	0-15	0
Hawick-----	10	0-7	1.0-10	6.1-7.8	0-10	0
		7-80	1.0-5.0	7.4-8.4	5-15	0
Biscay-----	3	0-20	20-35	6.1-7.8	0-15	0
		20-28	12-25	6.6-7.8	0-15	0
		28-36	5.0-20	6.6-7.8	0-15	0
		36-60	1.0-5.0	7.4-8.4	5-30	0
L75B:						
Barrington-----	85	0-15	18-26	5.6-7.3	0	0
		15-33	16-25	5.6-7.8	0-10	0
		33-60	4.0-17	6.1-8.4	0-30	0
Gladek-----	10	0-10	15-24	6.1-7.3	0	0
		10-39	15-22	6.1-7.3	0	0
		39-80	7.0-24	7.4-8.4	10-30	0
Madelia-----	5	0-19	27-40	6.1-7.3	0	0
		19-37	17-32	6.6-7.8	0	0
		37-60	15-28	7.4-8.4	5-20	0
L76B:						
Dickinson-----	80	0-14	15-20	5.6-7.3	0	0
		14-39	15-20	5.1-6.5	0	0
		39-60	5.0-10	5.6-7.3	0	0
Litchfield-----	13	0-20	6.0-14	5.1-7.3	0	0
		20-33	3.0-8.0	5.1-7.3	0	0
		33-40	15-24	5.1-7.3	---	---
		40-80	1.0-6.0	6.1-7.8	0-5	0
Darfur-----	5	0-9	10-20	6.1-7.3	0	0
		9-19	10-20	6.1-7.3	0	0
		19-31	5.0-15	6.6-7.8	0	0
		31-60	1.0-10	6.6-7.8	0-15	0
Clarion-----	2	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	10-20	0-1
L77A:						
Brownnton-----	75	0-22	---	7.4-8.4	---	---
		22-38	---	7.4-8.4	---	---
		38-60	10-20	7.4-8.4	10-20	0-1
Marna-----	15	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L77A:						
Lura-----	10	0-10	35-70	6.1-7.8	0-5	0
		10-58	29-54	6.1-7.3	0	0
		58-72	17-47	6.6-7.8	10-20	0
L78A:						
Canisteo-----	65	0-18	19-37	7.4-8.4	5-15	0
		18-39	10-20	7.4-8.4	15-25	0-1
		39-80	10-20	7.4-8.4	10-20	0-1
Crippin-----	10	0-15	20-25	6.6-8.4	0-25	0
		15-27	20-25	7.4-8.4	5-30	0
		27-60	10-20	7.4-8.4	10-20	0-1
Glencoe-----	10	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Canisteo, depressional-----	5	0-17	19-37	7.4-8.4	5-15	0
		17-30	12-29	7.4-8.4	12-18	0
		30-60	10-20	7.4-8.4	10-20	0-1
Harps-----	5	0-13	20-30	7.9-8.4	20-40	0
		13-30	10-20	7.4-8.4	15-25	0-1
		30-60	10-20	7.4-8.4	10-20	0-1
Webster-----	5	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1
L79B:						
Clarion-----	65	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
Clarion, eroded-----	25	0-10	20-25	5.6-7.3	0	0
		10-38	20-25	5.6-7.3	0-15	0
		38-60	10-20	7.4-8.4	15-25	0-1
Nicollet-----	8	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
Webster-----	2	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1
L80C2:						
Lester, eroded-----	75	0-7	10-24	5.6-7.3	0	0
		7-38	10-23	5.1-7.3	0	0
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L80C2:						
Hamel-----	5	0-24	15-30	5.6-7.3	0	0
		24-46	15-30	5.6-7.3	0	0
		46-80	10-20	7.4-8.4	10-20	0-1
Reedslake-----	5	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	5	0-7	11-18	7.4-8.4	5-30	0
		7-55	9.0-18	7.4-8.4	15-30	0
		55-80	10-20	7.4-8.4	10-20	0-1
L80D2:						
Lester, eroded-----	75	0-7	10-24	5.6-7.3	0	0
		7-38	10-23	5.1-7.3	0	0
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	10	0-23	20-25	6.1-7.3	0	0
		23-38	20-25	6.1-7.3	0	0
		38-50	15-25	6.1-7.3	0	0
		50-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	8	0-7	11-18	7.4-8.4	5-30	0
		7-55	9.0-18	7.4-8.4	15-30	0
		55-80	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
Hamel-----	2	0-24	15-30	5.6-7.3	0	0
		24-46	15-30	5.6-7.3	0	0
		46-80	10-20	7.4-8.4	10-20	0-1
L81A:						
Cordova-----	85	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
Le Sueur-----	10	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
Rolfe-----	5	0-12	20-25	5.1-7.3	0	0
		12-20	20-25	5.1-6.5	0	0
		20-35	20-30	5.6-7.3	0-25	0
		35-51	20-25	6.1-7.3	0-25	0
		51-60	10-20	7.4-8.4	10-20	0-1
L82A:						
Marna-----	85	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L82A:						
Barbert-----	10	0-7	---	5.1-6.5	0	0
		7-17	---	5.1-6.5	0	0
		17-43	---	5.1-7.3	0	0
		43-60	---	6.1-7.8	0	0
Guckeen-----	5	0-15	---	5.6-7.3	---	---
		15-24	---	5.6-7.3	---	---
		24-30	---	6.1-7.3	---	---
		30-60	10-20	7.4-8.4	10-20	0-1
L83A:						
Webster-----	65	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1
Glencoe-----	15	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Canisteo-----	10	0-18	19-37	7.4-8.4	5-15	0
		18-39	6.0-23	7.4-8.4	10-15	0
		39-80	10-20	7.4-8.4	15-25	0-1
Nicollet-----	10	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
L84A:						
Glencoe-----	80	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Very poorly drained muck-----	10	0-12	50-150	5.6-7.8	0-5	0
		12-29	16-27	6.1-7.8	0-5	0
		29-60	10-20	7.4-8.4	10-20	0-1
Canisteo-----	5	0-18	19-37	7.4-8.4	5-15	0
		18-39	10-20	7.4-8.4	15-25	0-1
		39-80	10-20	7.4-8.4	10-20	0-1
Harps-----	5	0-13	20-30	7.9-8.4	20-40	0
		13-30	10-20	7.4-8.4	15-25	0-1
		30-60	10-20	7.4-8.4	10-20	0-1
L85A:						
Nicollet-----	85	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
Clarion-----	10	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
Webster-----	5	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L86A:						
Madelia-----	90	0-19	27-40	6.1-7.3	0	0
		19-37	17-32	6.6-7.8	0	0
		37-60	15-28	7.4-8.4	5-20	0
Okoboji-----	5	0-26	41-45	6.1-7.8	0-15	0
		26-42	41-45	6.6-7.8	0-15	0
		42-60	36-41	6.6-8.4	0-30	0
Spicer-----	3	0-16	28-40	7.4-8.4	5-30	0
		16-40	20-35	7.4-8.4	5-30	0
		40-60	15-30	7.4-8.4	5-30	0
Kingston-----	2	0-16	25-35	5.6-7.3	0	0
		16-25	15-30	5.6-7.3	0-5	0
		25-60	15-25	7.4-8.4	5-15	0
L87A:						
Kingston-----	85	0-16	25-35	5.6-7.3	0	0
		16-25	15-30	5.6-7.3	0-5	0
		25-60	15-25	7.4-8.4	5-15	0
Truman-----	10	0-14	20-35	5.6-7.3	0	0
		14-36	15-25	5.6-7.8	0-15	0
		36-60	13-23	7.4-8.4	5-20	0
Madelia-----	5	0-19	27-40	6.1-7.3	0	0
		19-37	17-32	6.6-7.8	0	0
		37-60	15-28	7.4-8.4	5-20	0
L88A:						
Lura-----	85	0-10	35-70	6.1-7.8	0-5	0
		10-58	29-54	6.1-7.3	0	0
		58-72	17-47	6.6-7.8	10-20	0
Brownnton-----	10	0-22	---	7.4-8.4	---	---
		22-38	---	7.4-8.4	---	---
		38-60	10-20	7.4-8.4	10-20	0-1
Organic soil-----	5	0-10	50-150	5.6-7.8	0-5	0
		10-26	35-65	6.1-7.8	0-5	0
		26-48	20-40	6.1-7.8	0-5	0
		48-80	17-47	6.6-7.8	10-20	0
L89A:						
Guckeen-----	82	0-15	---	5.6-7.3	---	---
		15-24	---	5.6-7.3	---	---
		24-30	---	6.1-7.3	---	---
		30-60	10-20	7.4-8.4	10-20	0-1
Marna-----	10	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1
Clarion clay loam----	8	0-13	20-25	5.6-7.3	0	0
		13-37	20-25	5.6-7.3	0-15	0
		37-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L90A:						
Le Sueur-----	75	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
Cordova-----	13	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
Reedslake-----	12	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1
L91A:						
Mazaska-----	85	0-15	22-34	6.1-7.3	0	0
		15-42	19-29	4.5-6.5	0	0
		42-80	10-20	7.4-8.4	15-25	0-1
Lerdal-----	10	0-8	18-24	5.6-6.5	0	0
		8-12	18-24	5.6-6.5	0	0
		12-41	19-30	4.5-6.0	0	0
		41-80	10-20	7.4-8.4	15-25	0-1
Rolfe-----	5	0-12	20-25	5.1-7.3	0	0
		12-20	20-25	5.1-6.5	0	0
		20-35	20-30	5.6-7.3	0-25	0
		35-51	20-25	6.1-7.3	0-25	0
		51-60	10-20	7.4-8.4	10-20	0-1
L92A:						
Darfur-----	78	0-9	10-20	6.1-7.3	0	0
		9-19	10-20	6.1-7.3	0	0
		19-31	5.0-15	6.6-7.8	0	0
		31-60	1.0-10	6.6-7.8	0-15	0
Fieldon-----	10	0-19	15-30	7.4-8.4	5-30	0
		19-37	10-20	7.4-8.4	5-30	0
		37-60	1.0-10	7.4-8.4	5-30	0
Litchfield-----	5	0-20	6.0-14	5.1-7.3	0	0
		20-33	3.0-8.0	5.1-7.3	0	0
		33-40	15-24	5.1-7.3	---	---
		40-80	1.0-6.0	6.1-7.8	0-5	0
Webster-----	5	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1
Dassel-----	2	0-6	10-50	5.6-7.3	0	0
		6-23	10-50	5.6-7.3	0	0
		23-31	3.0-10	5.6-7.3	0	0
		31-60	1.0-5.0	6.1-7.8	0-5	0
L93A:						
Muskego-----	82	0-16	140-180	5.6-7.3	0	0
		16-76	10-45	7.4-8.4	60-80	0
		76-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L93A:						
Blue Earth-----	10	0-10	30-70	7.4-8.4	5-20	0
		10-68	30-70	7.4-8.4	5-40	0
		68-80	10-20	7.4-8.4	10-20	0-1
Mineral soil, drained	5	0-13	22-33	6.1-7.8	0-5	---
		13-31	16-27	6.1-7.8	0-5	---
		31-45	14-25	6.6-7.8	0-5	---
		45-80	10-20	7.4-8.4	10-20	0-1
Belleville-----	3	0-11	8.0-29	6.1-7.3	0	0
		11-27	3.0-8.0	6.1-7.3	0	0
		27-48	10-20	6.1-7.3	0	0
		48-80	10-20	7.4-8.4	10-20	0-1
L94A:						
Lowlein-----	75	0-18	10-25	6.1-7.3	0	0
		18-27	5.0-15	6.1-7.3	0	0
		27-46	5.0-15	6.1-7.3	0	0
		46-72	5.0-15	6.1-7.3	0	0
		72-80	10-20	7.4-8.4	10-20	0-1
Linder-----	15	0-15	15-20	6.1-7.3	0	0
		15-29	10-15	6.1-7.3	0	0
		29-60	5.0-10	7.4-8.4	5-30	0
Dickinson-----	8	0-14	15-20	5.6-7.3	0	0
		14-39	15-20	5.1-6.5	0	0
		39-60	5.0-10	5.6-7.3	0	0
Darfur-----	2	0-9	10-20	6.1-7.3	0	0
		9-19	10-20	6.1-7.3	0	0
		19-31	5.0-15	6.6-7.8	0	0
		31-60	1.0-10	6.6-7.8	0-15	0
L95E:						
Hawick-----	80	0-7	1.0-10	6.1-7.8	0-10	0
		7-10	1.0-5.0	6.1-7.8	0-10	0
		10-60	1.0-5.0	7.4-8.4	5-15	0
Estherville-----	10	0-8	2.0-20	5.6-7.3	0	0
		8-13	4.0-20	5.6-7.3	0	0
		13-60	0.0-5.0	6.6-8.4	0-15	0
Tomall-----	10	0-33	17-32	6.1-7.3	---	---
		33-42	11-21	6.1-7.3	---	---
		42-47	1.0-5.0	6.1-7.3	---	---
		47-80	1.0-5.0	7.4-7.8	1-5	0-1
L96B:						
Estherville-----	55	0-13	2.0-20	5.6-7.3	0	0
		13-18	4.0-20	5.6-7.3	0	0
		18-23	0.0-5.0	5.6-7.3	0	0
		23-60	0.0-5.0	6.6-8.4	0-15	0
Hawick-----	35	0-7	1.0-10	6.1-7.8	0-10	0
		7-80	1.0-5.0	7.4-8.4	5-15	0

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
L96B:						
Tomall-----	8	0-33	17-32	6.1-7.3	---	---
		33-42	11-21	6.1-7.3	---	---
		42-47	1.0-5.0	6.1-7.3	---	---
		47-80	1.0-5.0	7.4-7.8	1-5	0-1
Biscay-----	2	0-20	20-35	6.1-7.8	0-15	0
		20-28	12-25	6.6-7.8	0-15	0
		28-36	5.0-20	6.6-7.8	0-15	0
		36-60	1.0-5.0	7.4-8.4	5-30	0
L97C:						
Hawick-----	60	0-7	1.0-10	6.1-7.8	0-10	0
		7-80	1.0-5.0	7.4-8.4	5-15	0
Estherville-----	30	0-13	2.0-20	5.6-7.3	0	0
		13-18	4.0-20	5.6-7.3	0	0
		18-23	0.0-5.0	5.6-7.3	0	0
		23-60	0.0-5.0	6.6-8.4	0-15	0
Tomall-----	10	0-33	17-32	6.1-7.3	---	---
		33-42	11-21	6.1-7.3	---	---
		42-47	1.0-5.0	6.1-7.3	---	---
		47-80	1.0-5.0	7.4-7.8	1-5	0-1
L98A:						
Crippin-----	50	0-15	20-25	6.6-8.4	0-25	0
		15-27	20-25	7.4-8.4	5-30	0
		27-60	10-20	7.4-8.4	10-20	0-1
Nicollet-----	40	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
Canisteo-----	5	0-18	19-37	7.4-8.4	5-15	0
		18-39	10-20	7.4-8.4	15-25	0-1
		39-80	10-20	7.4-8.4	10-20	0-1
Clarion-----	5	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
L99B:						
Clarion-----	62	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
Swanlake-----	25	0-9	13-22	7.4-8.4	1-10	0
		9-43	10-20	7.4-8.4	15-25	0-1
		43-60	10-20	7.4-8.4	10-20	0-1
Nicollet-----	10	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
Webster-----	3	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L100B:						
Clarion-----	45	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
Estherville-----	35	0-13	2.0-20	5.6-7.3	0	0
		13-18	4.0-20	5.6-7.3	0	0
		18-23	0.0-5.0	5.6-7.3	0	0
		23-60	0.0-5.0	6.6-8.4	0-15	0
Lowleyn-----	5	0-14	10-25	6.1-7.3	0	0
		14-24	5.0-15	6.1-7.3	0	0
		24-31	0.0-10	6.1-7.3	0	0
		31-60	10-20	7.4-8.4	10-20	0-1
Nicollet-----	5	0-17	25-40	5.6-7.3	0	0
		17-33	15-25	5.6-7.3	0	0
		33-36	15-25	7.4-8.4	0-15	0
		36-60	10-20	7.4-8.4	10-20	0-1
Swanlake-----	5	0-9	13-22	7.4-8.4	1-10	0
		9-43	10-20	7.4-8.4	15-25	0-1
		43-60	10-20	7.4-8.4	10-20	0-1
Webster-----	5	0-19	22-32	6.6-7.3	0	0
		19-26	15-25	6.6-7.8	0-10	0
		26-60	10-20	7.4-8.4	10-20	0-1
L101C2:						
Omsrud, eroded-----	40	0-9	14-35	5.6-7.3	0	0
		9-19	9.0-22	5.6-7.3	0	0
		19-36	10-20	7.4-8.4	15-25	0-1
		36-80	10-20	7.4-8.4	10-20	0-1
Hawick-----	30	0-7	1.0-10	6.1-7.8	0-10	0
		7-80	1.0-5.0	7.4-8.4	5-15	0
Storden, eroded-----	20	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Delft-----	5	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
L101D2:						
Omsrud, eroded-----	40	0-9	14-35	5.6-7.3	0	0
		9-19	9.0-22	5.6-7.3	0	0
		19-36	10-20	7.4-8.4	15-25	0-1
		36-80	10-20	7.4-8.4	10-20	0-1
Hawick-----	25	0-7	1.0-10	6.1-7.8	0-10	0
		7-80	1.0-5.0	7.4-8.4	5-15	0
Storden, eroded-----	20	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L101D2:						
Ridgeton-----	6	0-23	20-25	6.1-7.3	0	0
		23-38	20-25	6.1-7.3	0	0
		38-50	15-25	6.1-7.3	0	0
		50-80	10-20	7.4-8.4	10-20	0-1
Delft-----	5	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
Terril-----	4	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
L102C2:						
Omsrud, eroded-----	45	0-9	14-35	5.6-7.3	0	0
		9-19	9.0-22	5.6-7.3	0	0
		19-36	10-20	7.4-8.4	15-25	0-1
		36-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	25	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Omsrud-----	15	0-12	14-35	5.6-7.3	0	0
		12-16	9.0-22	5.6-7.3	0	0
		16-32	10-20	7.4-8.4	15-25	0-1
		32-60	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
Delft-----	5	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
L102D2:						
Omsrud, eroded-----	45	0-9	14-35	5.6-7.3	0	0
		9-19	9.0-22	5.6-7.3	0	0
		19-36	10-20	7.4-8.4	15-25	0-1
		36-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	20	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Omsrud-----	15	0-12	14-35	5.6-7.3	0	0
		12-16	9.0-22	5.6-7.3	0	0
		16-32	10-20	7.4-8.4	15-25	0-1
		32-60	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	8	0-23	20-25	6.1-7.3	0	0
		23-38	20-25	6.1-7.3	0	0
		38-50	15-25	6.1-7.3	0	0
		50-80	10-20	7.4-8.4	10-20	0-1
Delft-----	6	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
L102D2: Terril-----	6	0-27 27-40 40-63 63-80	20-25 20-25 15-25 10-20	6.1-7.3 6.1-7.3 6.1-7.3 7.4-8.4	0 0 0 10-20	0 0 0 0-1
L103A: Fieldon-----	50	0-19 19-37 37-60	15-30 10-20 1.0-10	7.4-8.4 7.4-8.4 7.4-8.4	5-30 5-30 5-30	0 0 0
Canisteo-----	35	0-18 18-39 39-80	19-37 10-20 10-20	7.4-8.4 7.4-8.4 7.4-8.4	5-15 15-25 10-20	0 0-1 0-1
Darfur-----	10	0-9 9-19 19-31 31-60	10-20 10-20 5.0-15 1.0-10	6.1-7.3 6.1-7.3 6.6-7.8 6.6-7.8	0 0 0 0-15	0 0 0 0
Glencoe-----	5	0-10 10-35 35-48 48-60	23-37 16-27 14-25 10-20	6.1-7.8 6.1-7.8 6.6-7.8 7.4-8.4	0-5 0-5 0-5 10-20	0 0 0 0-1
L105C2: Lester, eroded-----	45	0-7 7-38 38-60 60-80	10-24 10-23 10-20 10-20	5.6-7.3 5.1-7.3 7.4-8.4 7.4-8.4	0 0 15-25 10-20	0 0 0-1 0-1
Hawick-----	35	0-7 7-80	1.0-10 1.0-5.0	6.1-7.8 7.4-8.4	0-10 5-15	0 0
Terril-----	10	0-27 27-40 40-63 63-80	20-25 20-25 15-25 10-20	6.1-7.3 6.1-7.3 6.1-7.3 7.4-8.4	0 0 0 10-20	0 0 0 0-1
Hamel-----	5	0-24 24-46 46-80	15-30 15-30 10-20	5.6-7.3 5.6-7.3 7.4-8.4	--- --- 10-20	--- --- 0-1
Storden, eroded-----	5	0-7 7-55 55-80	11-18 10-20 10-20	7.4-8.4 7.4-8.4 7.4-8.4	5-30 15-25 10-20	0 0-1 0-1
L105D2: Lester, eroded-----	45	0-7 7-38 38-60 60-80	10-24 10-23 10-20 10-20	5.6-7.3 5.1-7.3 7.4-8.4 7.4-8.4	0 0 15-25 10-20	0 0 0-1 0-1
Hawick-----	35	0-7 7-80	1.0-10 1.0-5.0	6.1-7.8 7.4-8.4	0-10 5-15	0 0
Ridgeton-----	8	0-23 23-38 38-50 50-80	20-25 20-25 15-25 10-20	6.1-7.3 6.1-7.3 6.1-7.3 7.4-8.4	0 0 0 10-20	0 0 0 0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L105D2:						
Hamel-----	5	0-24	15-30	5.6-7.3	---	---
		24-46	15-30	5.6-7.3	---	---
		46-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	5	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Terril-----	2	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
L106C2:						
Lester, eroded-----	62	0-7	10-24	5.6-7.3	0	0
		7-38	10-23	5.1-7.3	0	0
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	20	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
Hamel-----	5	0-24	15-30	5.6-7.3	---	---
		24-46	15-30	5.6-7.3	---	---
		46-80	10-20	7.4-8.4	10-20	0-1
Reedslake-----	3	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1
L106D2:						
Lester, eroded-----	62	0-7	10-24	5.6-7.3	0	0
		7-38	10-23	5.1-7.3	0	0
		38-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	20	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	10	0-23	20-25	6.1-7.3	0	0
		23-38	20-25	6.1-7.3	0	0
		38-50	15-25	6.1-7.3	0	0
		50-80	10-20	7.4-8.4	10-20	0-1
Terril-----	5	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
Hamel-----	3	0-24	15-30	5.6-7.3	---	---
		24-46	15-30	5.6-7.3	---	---
		46-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
L107A:						
Canisteo-----	50	0-18	19-37	7.4-8.4	5-15	0
		18-39	10-20	7.4-8.4	15-25	0-1
		39-80	10-20	7.4-8.4	10-20	0-1
Glencoe-----	35	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Harps-----	10	0-13	20-30	7.9-8.4	20-40	0
		13-30	10-20	7.4-8.4	15-25	0-1
		30-60	10-20	7.4-8.4	10-20	0-1
Canisteo, depressional-----	3	0-17	19-37	7.4-8.4	5-15	0
		17-30	12-29	7.4-8.4	12-18	0
		30-60	10-20	7.4-8.4	10-20	0-1
Crippin-----	2	0-15	20-25	6.6-8.4	0-25	0
		15-27	20-25	7.4-8.4	5-30	0
		27-60	10-20	7.4-8.4	10-20	0-1
L108A:						
Cordova-----	65	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
Rolfe-----	30	0-12	20-25	5.1-7.3	0	0
		12-20	20-25	5.1-6.5	0	0
		20-35	20-30	5.6-7.3	0-25	0
		35-51	20-25	6.1-7.3	0-25	0
		51-60	10-20	7.4-8.4	10-20	0-1
Le Sueur-----	5	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
L109A:						
Marna-----	65	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1
Barbert-----	30	0-7	---	5.1-6.5	0	0
		7-17	---	5.1-6.5	0	0
		17-43	---	5.1-7.3	0	0
		43-60	---	6.1-7.8	0	0
Guckeen-----	5	0-15	---	5.6-7.3	---	---
		15-24	---	5.6-7.3	---	---
		24-30	---	6.1-7.3	---	---
		30-60	10-20	7.4-8.4	10-20	0-1
L110E:						
Lester-----	50	0-5	10-24	5.6-7.3	---	---
		5-34	10-23	5.1-7.3	---	---
		34-60	10-20	7.4-8.4	15-25	0-1
		60-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L110E:						
Ridgeton-----	30	0-32	20-25	6.1-7.3	0	0
		32-40	15-25	6.1-7.3	0	0
		40-80	10-20	7.4-8.4	10-20	0-1
Cokato-----	10	0-16	15-25	5.6-7.3	0	0
		16-30	15-20	5.6-7.3	0	0
		30-60	10-20	7.4-8.4	15-25	0-1
Belview-----	6	0-9	11-18	7.4-8.4	5-30	0
		9-50	10-20	7.4-8.4	15-25	0-1
		50-60	10-20	7.4-8.4	10-20	0-1
Hamel-----	2	0-22	15-30	5.6-7.3	---	---
		22-41	15-30	5.6-7.3	---	---
		41-80	10-20	7.4-8.4	10-20	0-1
Terril-----	2	0-24	20-25	6.1-7.3	---	---
		24-37	20-25	6.1-7.3	---	---
		37-57	15-25	6.1-7.3	---	---
		57-80	10-20	7.4-8.4	10-20	0-1
L110F:						
Lester-----	55	0-6	10-24	5.6-7.3	0	0
		6-25	10-23	5.1-7.3	0	0
		25-60	10-20	7.4-8.4	10-20	0-1
Ridgeton-----	30	0-32	20-25	6.1-7.3	0	0
		32-40	15-25	6.1-7.3	0	0
		40-80	10-20	7.4-8.4	10-20	0-1
Cokato-----	8	0-16	15-25	5.6-7.3	0	0
		16-30	15-20	5.6-7.3	0	0
		30-60	10-20	7.4-8.4	15-25	0-1
Belview-----	4	0-9	11-18	7.4-8.4	5-30	0
		9-50	10-20	7.4-8.4	15-25	0-1
		50-60	10-20	7.4-8.4	10-20	0-1
Terril-----	2	0-24	20-25	6.1-7.3	---	---
		24-37	20-25	6.1-7.3	---	---
		37-57	15-25	6.1-7.3	---	---
		57-80	10-20	7.4-8.4	10-20	0-1
Hamel-----	1	0-22	15-30	5.6-7.3	---	---
		22-41	15-30	5.6-7.3	---	---
		41-80	10-20	7.4-8.4	10-20	0-1
L111A:						
Nicollet-----	85	0-10	25-40	5.6-7.3	0	0
		10-31	15-25	5.6-7.8	0-15	0
		31-42	10-20	7.4-8.4	15-25	0-1
		42-80	10-20	7.4-8.4	10-20	0-1
Clarion-----	10	0-14	20-25	5.6-7.3	0	0
		14-33	20-25	5.6-7.3	0-15	0
		33-60	10-20	7.4-8.4	15-25	0-1
Webster-----	5	0-24	22-32	6.6-7.3	0	0
		24-45	15-25	6.6-7.8	0-10	0
		45-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L112A:						
Webster-----	85	0-24	22-32	6.6-7.3	0	0
		24-45	15-25	6.6-7.8	0-10	0
		45-80	10-20	7.4-8.4	10-20	0-1
Glencoe-----	10	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
Nicollet-----	5	0-10	25-40	5.6-7.3	0	0
		10-31	15-25	5.6-7.8	0-15	0
		31-42	10-20	7.4-8.4	15-25	0-1
		42-80	10-20	7.4-8.4	10-20	0-1
L113B:						
Reedslake-----	75	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1
Le Sueur-----	10	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
Reedslake, eroded----	10	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1
Cordova-----	5	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
L114A:						
Hanlon, rarely flooded-----	85	0-24	15-20	6.1-7.3	0	0
		24-52	10-15	6.1-7.3	0	0
		52-57	5.0-10	5.6-7.3	0	0
		57-80	5.0-10	5.6-7.8	0-15	0
Coland, occasionally flooded-----	10	0-25	30-36	6.1-7.3	0	0
		25-54	30-36	6.1-7.3	0	0
		54-60	20-30	6.1-7.8	0-20	0
Minneopa, rarely flooded-----	5	0-15	11-20	5.6-7.3	0	0
		15-20	4.0-10	6.1-7.3	0	0
		20-60	1.0-6.0	6.1-8.4	0-15	0
L115A:						
Brownton-----	55	0-22	---	7.4-8.4	---	---
		22-38	---	7.4-8.4	---	---
		38-60	10-20	7.4-8.4	10-20	0-1
Lura-----	35	0-10	35-70	6.1-7.8	0-5	0
		10-58	29-54	6.1-7.3	0	0
		58-72	17-47	6.6-7.8	10-20	0

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L115A:						
Marna-----	10	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1
L116A:						
Le Sueur-----	45	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
Lerdal-----	40	0-8	18-24	5.6-6.5	0	0
		8-12	18-24	5.6-6.5	0	0
		12-41	19-30	4.5-6.0	0	0
		41-80	10-20	7.4-8.4	15-25	0-1
Mazaska-----	10	0-15	22-34	6.1-7.3	0	0
		15-42	19-29	4.5-6.5	0	0
		42-80	10-20	7.4-8.4	15-25	0-1
Kilkenny-----	5	0-11	20-30	5.6-7.3	---	---
		11-35	25-35	5.1-7.3	---	---
		35-80	10-20	7.4-8.4	10-20	0-1
L117C2:						
Omsrud, eroded-----	65	0-9	14-35	5.6-7.3	0	0
		9-19	9.0-22	5.6-7.3	0	0
		19-36	10-20	7.4-8.4	15-25	0-1
		36-80	10-20	7.4-8.4	10-20	0-1
Omsrud-----	15	0-12	14-35	5.6-7.3	0	0
		12-16	9.0-22	5.6-7.3	0	0
		16-32	10-20	7.4-8.4	15-25	0-1
		32-60	10-20	7.4-8.4	10-20	0-1
Terril-----	10	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1
Delft-----	5	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
Storden, eroded-----	5	0-7	11-18	7.4-8.4	5-30	0
		7-55	10-20	7.4-8.4	15-25	0-1
		55-80	10-20	7.4-8.4	10-20	0-1
L118A:						
Rushriver, frequently flooded-----	85	0-41	3.0-13	7.4-8.4	5-20	0
		41-80	3.0-13	7.4-8.4	5-20	0
Houghton, frequently flooded-----	5	0-60	140-200	4.5-7.8	0	0
Klossner, frequently flooded-----	5	0-22	150-200	5.6-7.8	0-15	---
		22-45	150-200	6.1-7.8	0-15	---
		45-60	20-50	6.1-7.8	0-30	---

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L118A:						
Medo, frequently flooded-----	5	0-25	40-100	6.1-7.8	0-10	0
		25-31	20-55	6.1-7.8	0-5	0
		31-45	20-55	6.1-7.8	0-5	0
		45-80	1.0-9.0	6.1-8.4	0-15	0
L119B:						
Angus-----	80	0-8	10-24	5.6-7.3	0	0
		8-35	10-23	5.1-7.3	0	0
		35-40	8.0-18	6.1-7.8	5-20	0
		40-80	10-20	7.4-8.4	10-20	0-1
Angus, eroded-----	10	0-8	10-24	5.6-7.3	0	0
		8-40	10-23	5.1-7.3	0	0
		40-60	10-20	7.4-8.4	15-25	0-1
Cordova-----	5	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
Le Sueur-----	5	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
L120A:						
Good Thunder-----	80	0-15	30-45	5.6-7.3	0	0
		15-32	25-45	5.1-7.3	0	0
		32-80	15-25	7.4-8.4	10-20	0
Ocheyedan-----	10	0-10	20-25	5.6-7.3	0	0
		10-30	20-25	6.1-7.8	0-15	0
		30-60	20-25	6.6-8.4	0-30	0
Minnetonka-----	10	0-13	24-43	5.6-7.3	---	---
		13-35	21-47	5.6-7.3	---	---
		35-60	15-32	6.6-7.8	5-20	---
L121B:						
Clarion-----	80	0-13	20-25	5.6-7.3	0	0
		13-37	20-25	5.6-7.3	0-15	0
		37-80	10-20	7.4-8.4	10-20	0-1
Guckeen-----	15	0-15	---	5.6-7.3	---	---
		15-24	---	5.6-7.3	---	---
		24-30	---	6.1-7.3	---	---
		30-60	10-20	7.4-8.4	10-20	0-1
Marna-----	5	0-20	26-48	6.1-7.3	---	---
		20-32	22-48	6.1-7.3	---	---
		32-41	15-25	6.6-7.4	0	0
		41-60	10-20	7.4-8.4	15-25	0-1
L122B:						
Reedslake-----	55	0-12	16-23	5.6-7.3	0	0
		12-26	13-21	5.6-7.3	0	0
		26-48	10-20	7.4-8.4	15-25	0-1
		48-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L122B:						
Estherville-----	25	0-13	2.0-20	5.6-7.3	0	0
		13-18	4.0-20	5.6-7.3	0	0
		18-23	0.0-5.0	5.6-7.3	0	0
		23-60	0.0-5.0	6.6-8.4	0-15	0
Le Sueur-----	10	0-17	15-26	5.6-7.3	0	0
		17-37	11-25	5.1-7.3	0	0
		37-46	10-20	7.4-8.4	15-25	0-1
		46-80	10-20	7.4-8.4	10-20	0-1
Cordova-----	5	0-18	20-30	6.1-7.3	0	0
		18-38	15-25	5.1-6.5	0	0
		38-80	10-20	7.4-8.4	10-20	0-1
Lowlein-----	5	0-14	10-25	6.1-7.3	0	0
		14-24	5.0-15	6.1-7.3	0	0
		24-31	0.0-10	6.1-7.3	0	0
		31-60	10-20	7.4-8.4	10-20	0-1
L123A:						
Belleville-----	85	0-11	8.0-29	6.1-7.3	0	0
		11-27	3.0-8.0	6.1-7.3	0	0
		27-48	10-20	6.1-7.3	0	0
		48-80	10-20	7.4-8.4	10-20	0-1
Granby-----	15	0-12	5.0-20	5.6-7.3	0	0
		12-24	1.0-10	5.6-7.8	0	0
		24-60	1.0-3.0	6.6-8.4	0	0
L124A:						
Glencoe mucky clay loam-----	85	0-10	41-50	6.1-7.8	0-15	0
		10-29	16-27	6.1-7.8	0-5	0
		29-42	14-25	6.6-7.8	0-5	0
		42-60	10-20	7.4-8.4	10-20	0-1
Canisteo-----	10	0-18	19-37	7.4-8.4	5-15	0
		18-39	10-20	7.4-8.4	15-25	0-1
		39-80	10-20	7.4-8.4	10-20	0-1
Glencoe clay loam----	5	0-10	23-37	6.1-7.8	0-5	0
		10-35	16-27	6.1-7.8	0-5	0
		35-48	14-25	6.6-7.8	0-5	0
		48-60	10-20	7.4-8.4	10-20	0-1
L125A:						
Hanlon, rarely flooded-----	60	0-24	15-20	6.1-7.3	0	0
		24-52	10-15	6.1-7.3	0	0
		52-57	5.0-10	5.6-7.3	0	0
		57-80	5.0-10	5.6-7.8	0-15	0
Coland, occasionally flooded-----	25	0-25	30-36	6.1-7.3	0	0
		25-54	30-36	6.1-7.3	0	0
		54-60	20-30	6.1-7.8	0-20	0
Minneopa, rarely flooded-----	15	0-15	11-20	5.6-7.3	0	0
		15-20	4.0-10	6.1-7.3	0	0
		20-60	1.0-6.0	6.1-8.4	0-15	0

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth	Cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum
		In	meq/100 g	pH	Pct	Pct
L126A:						
Coland, occasionally flooded-----	80	0-25	30-36	6.1-7.3	0	0
		25-54	30-36	6.1-7.3	0	0
		54-60	20-30	6.1-7.8	0-20	0
Minneopa, occasionally flooded	10	0-15	11-20	5.6-7.3	0	0
		15-20	4.0-10	6.1-7.3	0	0
		20-60	1.0-6.0	6.1-8.4	0-15	0
Havelock, occasionally flooded	5	0-23	30-36	7.4-8.4	5-30	0
		23-35	30-36	7.4-8.4	5-30	0
		35-60	10-20	7.4-8.4	5-30	0
Spillville, occasionally flooded	5	0-51	20-25	5.6-7.3	0	0
		51-60	20-25	5.6-7.3	0	0
L127A:						
Coland, frequently flooded-----	80	0-12	30-36	6.1-7.3	0	0
		12-30	30-36	6.1-7.3	0	0
		30-55	30-36	6.1-7.3	0	0
		55-80	20-30	6.1-7.8	0-20	0
Minneopa, occasionally flooded	10	0-16	11-20	5.6-7.3	0	0
		16-29	4.0-10	6.1-7.3	0	0
		29-60	1.0-6.0	6.1-8.4	0-15	0
Havelock, frequently flooded-----	5	0-30	30-36	7.4-8.4	5-30	0
		30-40	30-36	7.4-8.4	5-30	0
		40-60	10-20	7.4-8.4	5-30	0
Spillville, occasionally flooded	5	0-51	20-25	5.6-7.3	0	0
		51-60	20-25	5.6-7.3	0	0
L128A:						
Mazaska-----	60	0-15	22-34	6.1-7.3	0	0
		15-42	19-29	4.5-6.5	0	0
		42-80	10-20	7.4-8.4	15-25	0-1
Rolfe-----	30	0-12	20-25	5.1-7.3	0	0
		12-20	20-25	5.1-6.5	0	0
		20-35	20-30	5.6-7.3	0-25	0
		35-51	20-25	6.1-7.3	0-25	0
		51-60	10-20	7.4-8.4	10-20	0-1
Lerdal-----	10	0-8	18-24	5.6-6.5	0	0
		8-12	18-24	5.6-6.5	0	0
		12-41	19-30	4.5-6.0	0	0
		41-80	10-20	7.4-8.4	15-25	0-1
L129B:						
Terril-----	90	0-27	20-25	6.1-7.3	0	0
		27-40	20-25	6.1-7.3	0	0
		40-63	15-25	6.1-7.3	0	0
		63-80	10-20	7.4-8.4	10-20	0-1

Table 16.--Chemical Properties of the Soils--Continued

Map symbol and component name	Pct. of map unit	Depth In	Cation- exchange capacity meq/100 g	Soil reaction pH	Calcium carbon- ate Pct	Gypsum Pct
L129B:						
Delft-----	5	0-37	---	5.6-7.8	---	---
		37-50	---	6.6-7.8	---	---
		50-60	10-20	7.4-8.4	10-20	0-1
Hamel-----	5	0-24	15-30	5.6-7.3	---	---
		24-46	15-30	5.6-7.3	---	---
		46-80	10-20	7.4-8.4	10-20	0-1
L130A:						
Okoboji mucky silty clay loam-----	75	0-13	41-50	6.1-7.8	0-15	0
		13-35	41-45	6.6-7.8	0-15	0
		35-60	36-41	6.6-8.4	0-30	0
Okoboji silty clay loam-----	15	0-26	41-45	6.1-7.8	0-15	0
		26-42	41-45	6.6-7.8	0-15	0
		42-60	36-41	6.6-8.4	0-30	0
Brownnton-----	5	0-22	---	7.4-8.4	---	---
		22-38	---	7.4-8.4	---	---
		38-60	10-20	7.4-8.4	10-20	0-1
Spicer-----	5	0-16	28-40	7.4-8.4	5-30	0
		16-40	20-35	7.4-8.4	5-30	0
		40-60	15-30	7.4-8.4	5-30	0
M-W.						
Water, miscellaneous						
U3B.						
Udorthents (cut and fill land)						
W.						
Water						

Table 17.--Soil Moisture Status by Depth

(See text for definitions of terms used in this table. Depths of layers are in feet)

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
GP: Pits, gravel.													
Udipsamments.													
L5A: Delft, overwash	B/D	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.3: Moist 4.3-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Terril-----	B	0.0-4.9: Moist 4.9-6.7: Wet	0.0-6.7: Moist ---	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-4.9: Moist 4.9-6.7: Wet	0.0-6.7: Moist ---	0.0-4.9: Moist 4.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet
L13A: Klossner, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Houghton, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L14A: Houghton, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Klossner, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L15A: Klossner, ponded	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
Okoboji, ponded	C/D	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet
Glencoe, ponded	B/D	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet
Houghton, ponded	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
L16A: Muskego, ponded	A/D	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet
Blue Earth, ponded-----	B/D	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet
Houghton, ponded	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
Klossner, ponded	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L26B:													
Shorewood-----	C	0.0-5.0: Moist --- --- ---	0.0-5.0: Moist --- --- ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-5.0: Wet	0.0-1.5: Moist 1.5-2.5: Wet 2.5-3.0: Moist 3.0-5.0: Wet	0.0-2.5: Moist 2.5-3.5: Wet 3.5-3.9: Moist 3.9-5.0: Wet	0.0-3.5: Moist 3.5-5.0: Wet --- --- ---	0.0-5.0: Moist --- --- --- ---	0.0-5.0: Moist --- --- --- ---	0.0-5.0: Moist --- --- --- ---	0.0-5.0: Moist --- --- --- ---	0.0-4.6: Moist 4.6-5.0: Wet --- --- ---	0.0-4.6: Moist 4.6-5.0: Wet --- --- ---
Good Thunder----	C	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet
Minnetonka-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L36A:													
Hamel, overwash	B	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.3: Moist 4.3-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Terril-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L40B:													
Angus-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L40B: Kilkenny-----	C	0.0-4.9: Moist 4.9-6.7: Wet ---	0.0-6.7: Moist --- ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-6.7: Wet	0.0-1.7: Moist 1.7-2.5: Wet 2.5-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-3.5: Wet 3.5-3.9: Moist 3.9-6.7: Wet	0.0-4.4: Moist 4.4-6.7: ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.2: Moist 5.2-6.7: Wet ---	0.0-4.6: Moist 4.6-6.7: Wet ---	0.0-4.6: Moist 4.6-6.7: Wet ---
Lerdal-----	C	0.0-3.0: Moist 3.0-6.7: Wet ---	0.0-4.9: Moist 4.9-6.7: Wet ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-6.7: Wet	0.0-1.7: Moist 1.7-2.5: Wet 2.5-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-3.5: Wet 3.5-3.9: Moist 3.9-6.7: Wet	0.0-1.8: Moist 1.8-6.7: Wet ---	0.0-3.0: Moist 3.0-6.7: Wet ---	0.0-4.9: Moist 4.9-6.7: Wet ---	0.0-3.9: Moist 3.9-6.7: Wet ---	0.0-2.3: Moist 2.3-6.7: Wet ---	0.0-1.6: Moist 1.6-6.7: Wet ---	0.0-2.0: Moist 2.0-6.7: Wet ---
Mazaska-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L41C2: Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Kilkenny, eroded	C	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-2.8: Moist 2.8-4.0: Wet 4.0-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Derrynane-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

[illegible]

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L48A: Derrynane, overwash-----	C/D	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.3: Moist 4.3-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet
Derrynane-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet --- ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
L49A: Klossner, surface drained	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
Klossner, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L50A: Houghton, surface drained	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
Muskego, surface drained-----	A/D	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet
Klossner, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L51C2: Gladek, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Barrington-----	B	0.0-4.9: Moist 4.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 4.6-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-5.0: Moist ---	0.0-4.9: Moist 4.9-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Madelia-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October	November	December
L56A: Muskego, frequently flooded-----	D	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet
Klossner, frequently flooded-----	D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
Suckercreek, frequently flooded-----	D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.8: Moist 1.8-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.8: Moist 0.8-6.7: Wet	0.0-1.2: Moist 1.2-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L57A: Medo, drained---	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Houghton, drained-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
L63A: Klossner-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L63A: Lura-----	C/D	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-6.0: Wet ---	0.0-6.0: Wet ---	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.7: Moist 0.7-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-1.0: Moist 1.0-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.8: Moist 0.8-6.0: Wet
Brownnton-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L64A: Tadkee-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Tadkee, depressional---	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Better drained soil-----	B	0.0-4.9: Moist 4.9-6.7: Wet	0.0-6.7: Moist ---	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 4.6-6.7: Wet	0.0-4.9: Moist 4.9-6.7: Wet	0.0-6.7: Moist ---	0.0-4.9: Moist 4.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet
Granby-----	A/D	0.0-1.1: Moist 1.1-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Less sandy soil	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L73A: Blue Earth-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L73A:													
Belleville-----	B/D	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Canisteo-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L74A:													
Estherville-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Biscay-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L75B:													
Barrington-----	B	0.0-4.9: Moist 4.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 4.6-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-5.0: Moist ---	0.0-4.9: Moist 4.9-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
Gladek-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Madelia-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L76B:													
Dickinson-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Litchfield-----	B	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.3: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L76B:													
Darfur-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
L77A:													
Brownton-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Marna-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Lura-----	C/D	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-6.0: Wet ---	0.0-6.0: Wet ---	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.7: Moist 0.7-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-1.0: Moist 1.0-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.8: Moist 0.8-6.0: Wet
L78A:													
Canisteo-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Crippin-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L78A: Canisteo, depressional---	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Harps-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Dry 1.3-5.0: Wet
Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L79B: Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Clarion, eroded	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L80C2: Lester, eroded--	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist 4.6-6.7: Wet	0.0-6.7: Moist 3.6-6.7: Wet	0.0-6.7: Moist 3.9-6.7: Wet	0.0-6.7: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist 5.9-6.7: Wet	0.0-6.7: Moist 4.6-6.7: Wet	0.0-6.7: Moist 5.2-6.7: Wet
Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L80C2:													
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Reedslake-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
L80D2:													
Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Terril-----	B	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- 3.0-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-2.5: Moist 2.5-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- 4.9-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-3.9: Moist 3.9-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L81A:													
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L81A: Rolfe-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
L82A: Marna-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Barbert-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Guckeen-----	C	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet
L83A: Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Canisteo-----	B/D	--- 0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet ---	0.0-0.7: Moist 0.7-6.7: Wet ---	0.0-1.0: Moist 2.0-6.7: Wet ---	0.0-2.6: Moist 2.6-6.7: Wet ---	0.0-3.3: Moist 3.3-6.7: Wet ---	0.0-2.6: Moist 2.6-6.7: Wet ---	0.0-1.6: Moist 1.6-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet ---	0.0-1.3: Moist 1.3-6.7: Wet ---
Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L84A: Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Very poorly drained muck---	A/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Canistee-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Harps-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Dry 1.3-5.0: Wet
L85A: Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L86A: Madelia-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L86A:													
Okoboji-----	C/D	0.0-1.5: Moist 1.3-5.0: Wet	0.0-2.0: Moist 1.6-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Spicer-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Kingston-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
L87A:													
Kingston-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Truman-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Madelia-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L88A:													
Lura-----	C/D	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-6.0: Wet ---	0.0-6.0: Wet ---	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.7: Moist 0.7-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-1.0: Moist 1.0-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.8: Moist 0.8-6.0: Wet
Brownnton-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Organic soil----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L89A: Guckeen-----	C	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet
Marna-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Clarion clay loam-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
L90A: Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Reedslake-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
L91A: Mazaska-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Lerdal-----	C	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-6.7: Wet	0.0-1.7: Moist 1.7-2.5: Wet 2.5-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-3.5: Wet 3.5-3.9: Moist 3.9-6.7: Wet	0.0-1.8: Moist 1.8-6.7: Wet --- ---	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.9: Moist 3.9-6.7: Wet --- ---	0.0-2.3: Moist 2.3-6.7: Wet --- ---	0.0-1.6: Moist 1.6-6.7: Wet --- ---	0.0-2.0: Moist 2.0-6.7: Wet --- ---

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L91A: Rolfe-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
L92A: Darfur-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Fieldon-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Litchfield-----	B	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.3: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet
Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Dassel-----	B/D	0.0-1.1: Moist 1.1-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L93A: Muskego-----	A/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Blue Earth-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Mineral soil, drained-----	B/D	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L93A: Belleville-----	A/D	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.0-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L94A: Lowlein-----	B	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet
Linder-----	B	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet
Dickinson-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Darfur-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L95E: Hawick-----	A	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Estherville-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Tomall-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
L96B: Estherville-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L96B:													
Tomall-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Biscay-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L97C:													
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Estherville----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Tomall-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
L98A:													
Crippin-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Canisteo-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L99B:													
Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Swanlake-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L100B:													
Clarion-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Estherville----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Lowlein-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
Nicollet-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Swanlake-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L100B: Webster-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L101C2: Omsrud, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Terril-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
L101D2: Omsrud, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Terril-----	B	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- ---	0.0-3.0: Moist 3.0-6.6: Wet	0.0-2.5: Moist 2.5-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- ---	0.0-4.9: Moist 4.9-6.6: Wet	0.0-3.9: Moist 3.9-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L102C2:													
Omsrud, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Omsrud-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
L102D2:													
Omsrud, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Omsrud-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Terril-----	B	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist ---	0.0-3.0: Moist 3.0-6.6: Wet	0.0-2.5: Moist 2.5-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist ---	0.0-4.9: Moist 4.9-6.6: Wet	0.0-3.9: Moist 3.9-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L103A:													
Fieldon-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Canisteo-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Darfur-----	B/D	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.0-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L105C2:													
Lester, eroded--	B	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist
Hawick-----	A	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist
Terril-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet	0.0-1.0: Moist 1.0-6.6: Wet	0.0-0.5: Moist 0.5-6.6: Wet	0.0-0.7: Moist 0.7-6.6: Wet	0.0-1.0: Moist 1.0-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-1.6: Moist 1.6-6.6: Wet	0.0-1.0: Moist 1.0-6.6: Wet	0.0-1.3: Moist 1.3-6.6: Wet
Storden, eroded	B	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist	0.0-6.6: Moist
L105D2:													
Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Hawick-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L105D2:													
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Terril-----	B	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist ---	0.0-3.0: Moist 3.0-6.6: Wet	0.0-2.5: Moist 2.5-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist ---	0.0-4.9: Moist 4.9-6.6: Wet	0.0-3.9: Moist 3.9-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet
L106C2:													
Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Terril-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Reedslake-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
L106D2:													
Lester, eroded--	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Storden, eroded	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L106D2:													
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Terril-----	B	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-2.5: Moist 2.5-6.6: Wet	0.0-2.6: Moist 2.6-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-6.6: Moist --- Wet	0.0-4.9: Moist 4.9-6.6: Wet	0.0-3.9: Moist 3.9-6.6: Wet	0.0-3.0: Moist 3.0-6.6: Wet	0.0-3.3: Moist 3.3-6.6: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L107A:													
Canisteo-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet --- ---	0.0-5.0: Wet --- ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Harps-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Dry 1.3-5.0: Wet
Canisteo, depressional---	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet --- ---	0.0-5.0: Wet --- ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Crippin-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist --- Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist --- Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
L108A:													
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L108A: Rolfe-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
L109A: Marna-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Barbert-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Guckeen-----	C	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet
L110E: Lester-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Cokato-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Belview-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L110E: Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
L110F: Lester-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Ridgeton-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Cokato-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Belview-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L111A: Nicollet-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-6.7: Moist ---	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-6.7: Moist ---	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
Clarion-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---
Webster-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L112A: Webster-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Glencoe-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Nicollet-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-6.7: Moist ---	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-6.7: Moist ---	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
L113B: Reedslake-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
Reedslake, eroded-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L114A: Hanlon, rarely flooded-----	B	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
Ll14A: Coland, occasionally flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Minneopa, rarely flooded-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
Ll15A: Brownton-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Lura-----	C/D	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-6.0: Wet --- ---	0.0-6.0: Wet --- ---	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.7: Moist 0.7-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-2.0: Moist 2.0-6.0: Wet	0.0-1.5: Moist 1.5-6.0: Wet	0.0-1.0: Moist 1.0-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.8: Moist 0.8-6.0: Wet
Marna-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Ll16A: Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
Lerdal-----	C	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-6.7: Wet	0.0-1.7: Moist 1.7-2.5: Wet 2.5-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-3.5: Wet 3.5-3.9: Moist 3.9-6.7: Wet	0.0-1.8: Moist 1.8-6.7: Wet --- ---	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.9: Moist 3.9-6.7: Wet --- ---	0.0-2.3: Moist 2.3-6.7: Wet --- ---	0.0-1.6: Moist 1.6-6.7: Wet --- ---	0.0-2.0: Moist 2.0-6.7: Wet --- ---

[illegible]

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October	November	December
L118A: Klossner, frequently flooded-----	A/D	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet	0.0-5.0: Wet
Medo, frequently flooded-----	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
L119B: Angus-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Angus, eroded---	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Le Sueur-----	B	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.9: Moist 5.9-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.3: Moist 2.3-6.7: Wet
L120A: Good Thunder----	C	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-5.6: Moist 5.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet
Ocheyedan-----	B	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-5.0: Moist ---	0.0-4.6: Moist 4.6-5.0: Wet	0.0-5.0: Moist ---
Minnetonka-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L121B:													
Clarion-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Guckeen-----	C	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-4.9: Moist 4.9-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet
Marna-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L122B:													
Reedslake-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Estherville-----	B	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist	0.0-5.0: Moist
Le Sueur-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
Cordova-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
Lowlein-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
L123A:													
Belleville-----	B/D	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L123A: Granby-----	A/D	0.0-1.1: Moist 1.1-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.8: Moist 1.8-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
L124A: Glencoe mucky clay loam-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Canisteo-----	B/D	--- 0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet ---	0.0-0.7: Moist 0.7-6.7: Wet ---	0.0-1.0: Moist 2.0-6.7: Wet ---	0.0-2.6: Moist 2.6-6.7: Wet ---	0.0-3.3: Moist 3.3-6.7: Wet ---	0.0-2.6: Moist 2.6-6.7: Wet ---	0.0-1.6: Moist 1.6-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet ---	0.0-1.3: Moist 1.3-6.7: Wet ---
Glencoe clay loam-----	B/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
L125A: Hanlon, rarely flooded-----	B	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-2.8: Moist 2.8-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet
Coland, occasionally flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Minneopa, rarely flooded-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L126A: Coland, occasionally flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Minneopa, occasionally flooded-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet
Havelock, occasionally flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Spillville, occasionally flooded-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
L127A: Coland, frequently flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Minneopa, occasionally flooded-----	B	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.8: Moist 2.8-5.0: Wet	0.0-2.5: Moist 2.5-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-3.6: Moist 3.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-3.0: Moist 3.0-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October	November	December
L127A: Havelock, frequently flooded-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
Spillville, occasionally flooded-----	B	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-3.9: Moist 3.9-5.0: Wet	0.0-5.0: Moist ---	0.0-3.9: Moist 3.9-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.3: Moist 2.3-5.0: Wet
L128A: Mazaska-----	C/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.8: Moist 0.8-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet
Rolfe-----	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Lerdal-----	C	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.0: Moist 3.0-4.0: Wet 4.0-4.4: Moist 4.4-6.7: Wet	0.0-1.7: Moist 1.7-2.5: Wet 2.5-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-3.5: Wet 3.5-3.9: Moist 3.9-6.7: Wet	0.0-1.8: Moist 1.8-6.7: Wet --- ---	0.0-3.0: Moist 3.0-6.7: Wet --- ---	0.0-4.9: Moist 4.9-6.7: Wet --- ---	0.0-3.9: Moist 3.9-6.7: Wet --- ---	0.0-2.3: Moist 2.3-6.7: Wet --- ---	0.0-1.6: Moist 1.6-6.7: Wet --- ---	0.0-2.0: Moist 2.0-6.7: Wet --- ---
L129B: Terril-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.6: Moist 4.6-6.7: Wet	0.0-3.6: Moist 3.6-6.7: Wet	0.0-3.9: Moist 3.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-5.9: Moist 5.9-6.7: Wet	0.0-4.6: Moist 4.6-6.7: Wet	0.0-5.2: Moist 5.2-6.7: Wet
Delft-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet

Table 17.--Soil Moisture Status by Depth--Continued

Map symbol and component name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October	November	December
L129B: Hamel-----	B/D	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.7: Moist 0.7-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-3.3: Moist 3.3-6.7: Wet	0.0-2.6: Moist 2.6-6.7: Wet	0.0-1.6: Moist 1.6-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.3: Moist 1.3-6.7: Wet
L130A: Okoboji mucky silty clay loam	C/D	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Okoboji silty clay loam-----	C/D	0.0-1.5: Moist 1.3-5.0: Wet	0.0-2.0: Moist 1.6-5.0: Wet	0.0-5.0: Wet ---	0.0-5.0: Wet ---	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.5: Moist 1.5-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet
Brownton-----	C/D	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.8: Moist 0.8-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-2.0: Moist 2.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet
Spicer-----	B/D	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-0.5: Moist 0.5-5.0: Wet	0.0-0.7: Moist 0.7-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-3.3: Moist 3.3-5.0: Wet	0.0-2.6: Moist 2.6-5.0: Wet	0.0-1.6: Moist 1.6-5.0: Wet	0.0-1.0: Moist 1.0-5.0: Wet	0.0-1.3: Moist 1.3-5.0: Wet
M-W. Water, miscellaneous													
U3B. Udorthents (cut and fill land)													
W. Water													

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L16A:												
Muskego, ponded	None	None	None	None	None	None	None	None	None	None	None	None
Blue Earth, ponded-----	None	None	None	None	None	None	None	None	None	None	None	None
Houghton, ponded	None	None	None	None	None	None	None	None	None	None	None	None
Klossner, ponded	None	None	None	None	None	None	None	None	None	None	None	None
L26B:												
Shorewood-----	None	None	None	None	None	None	None	None	None	None	None	None
Good Thunder----	None	None	None	None	None	None	None	None	None	None	None	None
Minnetonka-----	None	None	None	None	None	None	None	None	None	None	None	None
L36A:												
Hamel, overwash	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	None	None	None	None	None	None	None	None	None	None
L40B:												
Angus-----	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny-----	None	None	None	None	None	None	None	None	None	None	None	None
Lerdal-----	None	None	None	None	None	None	None	None	None	None	None	None
Mazaska-----	None	None	None	None	None	None	None	None	None	None	None	None
L41C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Derrynane-----	None	None	None	None	None	None	None	None	None	None	None	None

[illegible]

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L77A:												
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
Lura-----	None	None	None	None	None	None	None	None	None	None	None	None
L78A:												
Canistee-----	None	None	None	None	None	None	None	None	None	None	None	None
Crippin-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	None	None	None	None	None	None	None	None	None	None
Canistee, depressional---	None	None	None	None	None	None	None	None	None	None	None	None
Harps-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L79B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L80C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
L80D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L86A:												
Madelia-----	None	None	None	None	None	None	None	None	None	None	None	None
Okoboji-----	None	None	None	None	None	None	None	None	None	None	None	None
Spicer-----	None	None	None	None	None	None	None	None	None	None	None	None
Kingston-----	None	None	None	None	None	None	None	None	None	None	None	None
L87A:												
Kingston-----	None	None	None	None	None	None	None	None	None	None	None	None
Truman-----	None	None	None	None	None	None	None	None	None	None	None	None
Madelia-----	None	None	None	None	None	None	None	None	None	None	None	None
L88A:												
Lura-----	None	None	None	None	None	None	None	None	None	None	None	None
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Organic soil----	None	None	None	None	None	None	None	None	None	None	None	None
L89A:												
Guckeen-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion clay loam-----	None	None	None	None	None	None	None	None	None	None	None	None
L90A:												
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
L91A:												
Mazaska-----	None	None	None	None	None	None	None	None	None	None	None	None
Lerdal-----	None	None	None	None	None	None	None	None	None	None	None	None
Rolfe-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L97C:												
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville----	None	None	None	None	None	None	None	None	None	None	None	None
Tomall-----	None	None	None	None	None	None	None	None	None	None	None	None
L98A:												
Crippin-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Canisteco-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
L99B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Swanlake-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L100B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville----	None	None	None	None	None	None	None	None	None	None	None	None
Lowlein-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Swanlake-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L101C2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L105C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
L105D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L106C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
L106D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L110F:												
Belview-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
L111A:												
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L112A:												
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
L113B:												
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake, eroded-----	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
L114A:												
Hanlon, rarely flooded-----	None	None	Rare Very brief	Rare Very brief	Rare Very brief	Rare Very brief	None	None	None	None	None	None
Coland, occasionally flooded-----	None	None	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Very brief	Occasional Very brief	None	None	None	None
Minneopa, rarely flooded-----	None	None	Rare Very brief	Rare Very brief	Rare Very brief	Rare Very brief	None	None	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L115A:												
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Lura-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
L116A:												
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Lerdal-----	None	None	None	None	None	None	None	None	None	None	None	None
Mazaska-----	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny-----	None	None	None	None	None	None	None	None	None	None	None	None
L117C2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Omsrud-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
L118A:												
Rushriver, frequently flooded-----	None	None	Frequent Long	Frequent Long	Frequent Long	Frequent Long	Occasional Brief	Occasional Brief	None	None	None	None
Houghton, frequently flooded-----	None	None	Frequent Long	Frequent Long	Frequent Long	Frequent Long	Occasional Brief	Occasional Brief	None	None	None	None
Klossner, frequently flooded-----	None	None	Frequent Long	Frequent Long	Frequent Long	Frequent Long	Occasional Brief	Occasional Brief	None	None	None	None
Medo, frequently flooded-----	None	None	Frequent Long	Frequent Long	Frequent Long	Frequent Long	Occasional Brief	Occasional Brief	None	None	None	None

Table 18.--Flooding Frequency and Duration--Continued

[illegible]

Table 18.--Flooding Frequency and Duration--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L125A: Hanlon, rarely flooded-----	None	None	Rare Very brief	Rare Very brief	Rare Very brief	Rare Very brief	None	None	None	None	None	None
Coland, occasionally flooded-----	None	None	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Very brief	Occasional Very brief	None	None	None	None
Minneopa, rarely flooded-----	None	None	Rare Very brief	Rare Very brief	Rare Very brief	Rare Very brief	None	None	None	None	None	None
L126A: Coland, occasionally flooded-----	None	None	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Very brief	Occasional Very brief	None	None	None	None
Minneopa, occasionally flooded-----	None	None	Rare Very brief	Rare Very brief	Rare Very brief	Rare Very brief	None	None	None	None	None	None
Havelock, occasionally flooded-----	None	None	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Brief	Occasional Very brief	Occasional Very brief	None	None	None	None
Spillville, occasionally flooded-----	None	None	Occasional Very brief	Occasional Very brief	Occasional Very brief	Occasional Very brief	Occasional Very brief	Occasional Very brief	None	None	None	None

[illegible]

[illegible]

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L14A: Klossner, drained-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Mineral soil, drained-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L15A: Klossner, ponded	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0
Okoboji, ponded	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0
Glencoe, ponded	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0
Houghton, ponded	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0
L16A: Muskego, ponded	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0
Blue Earth, ponded-----	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 3.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 0.5	Frequent Very long Depth: 1.0	Frequent Very long Depth: 2.0	Frequent Very long Depth: 2.5	Frequent Very long Depth: 2.0

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[illegible]

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L41D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Derrynane-----	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
L41E:												
Lester-----	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Derrynane-----	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
L48A:												
Derrynane, overwash-----	None	None	None	None	None	None	None	None	None	None	None	None
Derrynane-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L49A:												
Klossner, surface drained	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

[illegible]

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L56A: Muskego, frequently flooded-----	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None
Klossner, frequently flooded-----	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None
Suckercreek, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
L57A: Medo, drained---	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Mineral soil, drained-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Houghton, drained-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L63A: Klossner-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L63A: Lura-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
L64A: Tadkee-----	None	None	None	None	None	None	None	None	None	None	None	None
Tadkee, depressional---	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None
Better drained soil-----	None	None	None	None	None	None	None	None	None	None	None	None
Granby-----	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None
Less sandy soil	None	None	None	None	None	None	None	None	None	None	None	None
L73A: Blue Earth-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Belleville-----	None	None	None	None	None	None	None	None	None	None	None	None
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
L74A: Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Biscay-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L75B:												
Barrington-----	None	None	None	None	None	None	None	None	None	None	None	None
Gladek-----	None	None	None	None	None	None	None	None	None	None	None	None
Madelia-----	None	None	None	None	None	None	None	None	None	None	None	None
L76B:												
Dickinson-----	None	None	None	None	None	None	None	None	None	None	None	None
Litchfield-----	None	None	None	None	None	None	None	None	None	None	None	None
Darfur-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
L77A:												
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
Lura-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L78A:												
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
Crippin-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Canisteo, depressional---	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Harps-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L79B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L80C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
L80D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
L81A:												
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Rolfe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L82A:												
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L86A:												
Madelia-----	None	None	None	None	None	None	None	None	None	None	None	None
Okoboji-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Spicer-----	None	None	None	None	None	None	None	None	None	None	None	None
Kingston-----	None	None	None	None	None	None	None	None	None	None	None	None
L87A:												
Kingston-----	None	None	None	None	None	None	None	None	None	None	None	None
Truman-----	None	None	None	None	None	None	None	None	None	None	None	None
Madelia-----	None	None	None	None	None	None	None	None	None	None	None	None
L88A:												
Lura-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Organic soil----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L89A:												
Guckeen-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion clay loam-----	None	None	None	None	None	None	None	None	None	None	None	None
L90A:												
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L94A:												
Lowlein-----	None	None	None	None	None	None	None	None	None	None	None	None
Linder-----	None	None	None	None	None	None	None	None	None	None	None	None
Dickinson-----	None	None	None	None	None	None	None	None	None	None	None	None
Darfur-----	None	None	None	None	None	None	None	None	None	None	None	None
L95E:												
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Tomall-----	None	None	None	None	None	None	None	None	None	None	None	None
L96B:												
Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Tomall-----	None	None	None	None	None	None	None	None	None	None	None	None
Biscay-----	None	None	None	None	None	None	None	None	None	None	None	None
L97C:												
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Tomall-----	None	None	None	None	None	None	None	None	None	None	None	None
L98A:												
Crippin-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
L99B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Swanlake-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L99B:												
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L100B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Lowlein-----	None	None	None	None	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Swanlake-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L101C2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L101D2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L102C2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L102C2: Omsrud-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
L102D2: Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Omsrud-----	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L103A: Fieldon-----	None	None	None	None	None	None	None	None	None	None	None	None
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
Darfur-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L105C2: Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L105D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Hawick-----	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
L106C2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
L106D2:												
Lester, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
Ridgeton-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
L107A:												
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Harps-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

[illegible]

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L110F:												
Cokato-----	None	None	None	None	None	None	None	None	None	None	None	None
Belview-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
L111A:												
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
L112A:												
Webster-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Nicollet-----	None	None	None	None	None	None	None	None	None	None	None	None
L113B:												
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Reedslake, eroded-----	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
L114A:												
Hanlon, rarely flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Coland, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Minneopa, rarely flooded-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L115A:												
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Lura-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
L116A:												
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Lerdal-----	None	None	None	None	None	None	None	None	None	None	None	None
Mazaska-----	None	None	None	None	None	None	None	None	None	None	None	None
Kilkenny-----	None	None	None	None	None	None	None	None	None	None	None	None
L117C2:												
Omsrud, eroded--	None	None	None	None	None	None	None	None	None	None	None	None
Omsrud-----	None	None	None	None	None	None	None	None	None	None	None	None
Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Storden, eroded	None	None	None	None	None	None	None	None	None	None	None	None
L118A:												
Rushriver, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Houghton, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Klossner, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Medo, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L119B:												
Angus-----	None	None	None	None	None	None	None	None	None	None	None	None
Angus, eroded---	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
L120A:												
Good Thunder----	None	None	None	None	None	None	None	None	None	None	None	None
Ocheyedan-----	None	None	None	None	None	None	None	None	None	None	None	None
Minnetonka-----	None	None	None	None	None	None	None	None	None	None	None	None
L121B:												
Clarion-----	None	None	None	None	None	None	None	None	None	None	None	None
Guckeen-----	None	None	None	None	None	None	None	None	None	None	None	None
Marna-----	None	None	None	None	None	None	None	None	None	None	None	None
L122B:												
Reedslake-----	None	None	None	None	None	None	None	None	None	None	None	None
Estherville-----	None	None	None	None	None	None	None	None	None	None	None	None
Le Sueur-----	None	None	None	None	None	None	None	None	None	None	None	None
Cordova-----	None	None	None	None	None	None	None	None	None	None	None	None
Lowlein-----	None	None	None	None	None	None	None	None	None	None	None	None
L123A:												
Belleville-----	None	None	None	None	None	None	None	None	None	None	None	None
Granby-----	None	None	Frequent Long Depth: 1.0	Frequent Very long Depth: 1.0	Frequent Long Depth: 1.0	Frequent Brief Depth: 0.5	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L124A: Glencoe mucky clay loam-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Canisteo-----	None	None	None	None	None	None	None	None	None	None	None	None
Glencoe clay loam-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
L125A: Hanlon, rarely flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Coland, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Minneopa, rarely flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
L126A: Coland, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Minneopa, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Havelock, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Spillville, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
L127A: Coland, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

Map symbol and component name	January	February	March	April	May	June	July	August	September	October	November	December
L127A: Minneopa, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Havelock, frequently flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
Spillville, occasionally flooded-----	None	None	None	None	None	None	None	None	None	None	None	None
L128A: Mazaska-----	None	None	None	None	None	None	None	None	None	None	None	None
Rolfe-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Lerdal-----	None	None	None	None	None	None	None	None	None	None	None	None
L129B: Terril-----	None	None	None	None	None	None	None	None	None	None	None	None
Delft-----	None	None	None	None	None	None	None	None	None	None	None	None
Hamel-----	None	None	None	None	None	None	None	None	None	None	None	None
L130A: Okoboji mucky silty clay loam	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Okoboji silty clay loam-----	None	None	Frequent Long Depth: 0.5	Frequent Brief Depth: 1.0	None	None	None	None	None	None	None	None
Brownton-----	None	None	None	None	None	None	None	None	None	None	None	None
Spicer-----	None	None	None	None	None	None	None	None	None	None	None	None

Table 19.--Ponding Frequency, Duration, and Depth--Continued

[illegible]

Table 20.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
GP:						
Pits, gravel.						
Udipsamments.						
L5A:						
Delft, overwash-----	50	---	---	High	High	Low
Delft-----	40	---	---	High	High	Low
Glencoe-----	5	---	---	High	High	Low
Terril-----	5	---	---	Moderate	Moderate	Low
L13A:						
Klossner, drained-----	80	2-4	25-32	High	High	Moderate
Mineral soil, drained--	15	---	---	High	High	Low
Houghton, drained-----	5	6-18	55-60	High	High	Moderate
L14A:						
Houghton, drained-----	80	6-18	55-60	High	High	Moderate
Klossner, drained-----	10	2-4	25-32	High	High	Moderate
Mineral soil, drained--	10	---	---	High	High	Low
L15A:						
Klossner, ponded-----	30	2-4	25-32	High	High	Moderate
Okoboji, ponded-----	30	---	---	High	High	Low
Glencoe, ponded-----	30	---	---	High	High	Low
Houghton, ponded-----	10	6-18	55-60	High	High	Moderate
L16A:						
Muskego, ponded-----	30	0	35-45	High	Moderate	Moderate
Blue Earth, ponded-----	30	---	---	High	High	Low
Houghton, ponded-----	30	6-18	55-60	High	High	Moderate
Klossner, ponded-----	10	2-4	25-32	High	High	Moderate
L26B:						
Shorewood-----	90	---	---	High	High	Moderate
Good Thunder-----	5	---	---	High	High	Moderate
Minnetonka-----	5	---	---	High	High	Low
L36A:						
Hamel, overwash-----	50	---	---	High	High	Low
Hamel-----	43	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L36A:						
Terril-----	5	---	---	Moderate	Moderate	Low
Glencoe-----	2	---	---	High	High	Low
L40B:						
Angus-----	45	---	---	Moderate	Low	Moderate
Kilkenny-----	40	---	---	High	Moderate	Moderate
Lerdal-----	10	---	---	High	High	High
Mazaska-----	5	---	---	High	High	Moderate
L41C2:						
Lester, eroded-----	45	---	---	Moderate	Low	Moderate
Kilkenny, eroded-----	40	---	---	High	Moderate	Moderate
Terril-----	10	---	---	Moderate	Moderate	Low
Derrynane-----	5	---	---	High	High	Low
L41D2:						
Lester, eroded-----	45	---	---	Moderate	Low	Moderate
Kilkenny, eroded-----	35	---	---	High	Moderate	Moderate
Terril-----	10	---	---	Moderate	Moderate	Low
Derrynane-----	5	---	---	High	High	Low
Ridgeton-----	5	---	---	Moderate	Moderate	Low
L41E:						
Lester-----	45	---	---	Moderate	Low	Moderate
Kilkenny-----	40	---	---	High	Moderate	Moderate
Terril-----	5	---	---	Moderate	Moderate	Low
Derrynane-----	5	---	---	High	High	Low
Ridgeton-----	5	---	---	Moderate	Moderate	Low
L48A:						
Derrynane, overwash----	50	---	---	High	High	Low
Derrynane-----	40	---	---	High	High	Low
Glencoe-----	5	---	---	High	High	Low
Terril-----	5	---	---	Moderate	Moderate	Low
L49A:						
Klossner, surface drained-----	65	2-4	25-32	High	High	Moderate
Klossner, drained-----	20	2-4	25-32	High	High	Moderate
Mineral soil, drained--	15	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L50A:						
Houghton, surface drained-----	40	6-18	55-60	High	High	Moderate
Muskego, surface drained-----	40	0	35-45	High	Moderate	Moderate
Klossner, drained-----	10	2-4	25-32	High	High	Moderate
Mineral soil, drained--	10	---	---	High	High	Low
L51C2:						
Gladek, eroded-----	80	---	---	High	Moderate	Moderate
Barrington-----	10	---	---	High	Moderate	Moderate
Lester, eroded-----	5	---	---	Moderate	Low	Moderate
Madelia-----	5	---	---	High	High	Low
L56A:						
Muskego, frequently flooded-----	45	0	35-45	High	Moderate	Moderate
Klossner, frequently flooded-----	45	2-4	25-32	High	High	Moderate
Suckercreek, frequently flooded-----	10	---	---	High	High	Low
L57A:						
Medo, drained-----	80	8-22	16-44	High	High	Moderate
Mineral soil, drained--	15	---	---	High	High	Low
Houghton, drained-----	5	6-18	55-60	High	High	Moderate
L63A:						
Klossner-----	85	2-4	25-32	High	High	Moderate
Lura-----	10	---	---	High	High	Low
Brownnton-----	5	---	---	High	High	Low
L64A:						
Tadkee-----	50	---	---	High	High	Low
Tadkee, depressiona---	36	---	---	High	High	Moderate
Better drained soil----	8	---	---	Moderate	Low	Low
Granby-----	4	---	---	High	High	Low
Less sandy soil-----	2	---	---	High	High	Low
L73A:						
Blue Earth-----	80	---	---	High	High	Low
Belleville-----	10	---	---	High	High	Low
Canisteo-----	10	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L74A:						
Estherville-----	87	---	---	Low	Low	Low
Hawick-----	10	---	---	Low	Low	Low
Biscay-----	3	---	---	High	Moderate	Low
L75B:						
Barrington-----	85	---	---	High	Moderate	Moderate
Gladek-----	10	---	---	High	Moderate	Moderate
Madelia-----	5	---	---	High	High	Low
L76B:						
Dickinson-----	80	---	---	Moderate	Low	Moderate
Litchfield-----	13	---	---	Moderate	Low	Low
Darfur-----	5	---	---	High	High	Low
Clarion-----	2	---	---	Moderate	Low	Low
L77A:						
Brownton-----	75	---	---	High	High	Low
Marna-----	15	---	---	High	High	Low
Lura-----	10	---	---	High	High	Low
L78A:						
Canisteo-----	65	---	---	High	High	Low
Crippin-----	10	---	---	High	High	Low
Glencoe-----	10	---	---	High	High	Low
Canisteo, depressional	5	---	---	High	High	Low
Harps-----	5	---	---	High	High	Low
Webster-----	5	---	---	High	High	Low
L79B:						
Clarion-----	65	---	---	Moderate	Low	Low
Clarion, eroded-----	25	---	---	Moderate	Low	Low
Nicollet-----	8	---	---	High	High	Low
Webster-----	2	---	---	High	High	Low
L80C2:						
Lester, eroded-----	75	---	---	Moderate	Low	Moderate
Terril-----	10	---	---	Moderate	Moderate	Low
Hamel-----	5	---	---	High	High	Low
Reedslake-----	5	---	---	Moderate	Low	Low
Storden, eroded-----	5	---	---	Moderate	Low	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L80D2:						
Lester, eroded-----	75	---	---	Moderate	Low	Moderate
Ridgeton-----	10	---	---	Moderate	Moderate	Low
Storden, eroded-----	8	---	---	Moderate	Low	Low
Terril-----	5	---	---	Moderate	Moderate	Low
Hamel-----	2	---	---	High	High	Low
L81A:						
Cordova-----	85	---	---	High	High	Low
Le Sueur-----	10	---	---	High	High	Low
Rolfe-----	5	---	---	High	High	Moderate
L82A:						
Marna-----	85	---	---	High	High	Low
Barbert-----	10	---	---	High	High	Low
Guckeen-----	5	---	---	High	High	Low
L83A:						
Webster-----	65	---	---	High	High	Low
Glencoe-----	15	---	---	High	High	Low
Canisteo-----	10	---	---	High	High	Low
Nicollet-----	10	---	---	High	High	Low
L84A:						
Glencoe-----	80	---	---	High	High	Low
Very poorly drained muck-----	10	2-4	25-32	High	High	Moderate
Canisteo-----	5	---	---	High	High	Low
Harps-----	5	---	---	High	High	Low
L85A:						
Nicollet-----	85	---	---	High	High	Low
Clarion-----	10	---	---	Moderate	Low	Low
Webster-----	5	---	---	High	High	Low
L86A:						
Madelia-----	90	---	---	High	High	Low
Okoboji-----	5	---	---	High	High	Low
Spicer-----	3	---	---	High	High	Low
Kingston-----	2	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L87A:						
Kingston-----	85	---	---	High	High	Low
Truman-----	10	---	---	High	Low	Low
Madelia-----	5	---	---	High	High	Low
L88A:						
Lura-----	85	---	---	High	High	Low
Brownton-----	10	---	---	High	High	Low
Organic soil-----	5	2-4	25-32	High	High	Moderate
L89A:						
Guckeen-----	82	---	---	High	High	Low
Marna-----	10	---	---	High	High	Low
Clarion clay loam-----	8	---	---	Moderate	Low	Low
L90A:						
Le Sueur-----	75	---	---	High	High	Low
Cordova-----	13	---	---	High	High	Low
Reedslake-----	12	---	---	Moderate	Low	Low
L91A:						
Mazaska-----	85	---	---	High	High	Moderate
Lerdal-----	10	---	---	High	High	High
Rolfe-----	5	---	---	High	High	Moderate
L92A:						
Darfur-----	78	---	---	High	High	Low
Fieldon-----	10	---	---	High	High	Low
Litchfield-----	5	---	---	Moderate	Low	Low
Webster-----	5	---	---	High	High	Low
Dassel-----	2	---	---	High	High	Low
L93A:						
Muskego-----	82	0	35-45	High	Moderate	Moderate
Blue Earth-----	10	---	---	High	High	Low
Mineral soil, drained--	5	---	---	High	High	Low
Belleville-----	3	---	---	High	High	Low
L94A:						
Lowlein-----	75	---	---	Moderate	Moderate	Low
Linder-----	15	---	---	High	Moderate	Low
Dickinson-----	8	---	---	Moderate	Low	Moderate
Darfur-----	2	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L95E:						
Hawick-----	80	---	---	Low	Low	Low
Estherville-----	10	---	---	Low	Low	Low
Tomall-----	10	---	---	Moderate	High	Low
L96B:						
Estherville-----	55	---	---	Low	Low	Low
Hawick-----	35	---	---	Low	Low	Low
Tomall-----	8	---	---	Moderate	High	Low
Biscay-----	2	---	---	High	Moderate	Low
L97C:						
Hawick-----	60	---	---	Low	Low	Low
Estherville-----	30	---	---	Low	Low	Low
Tomall-----	10	---	---	Moderate	High	Low
L98A:						
Crippin-----	50	---	---	High	High	Low
Nicollet-----	40	---	---	High	High	Low
Canisteo-----	5	---	---	High	High	Low
Clarion-----	5	---	---	Moderate	Low	Low
L99B:						
Clarion-----	62	---	---	Moderate	Low	Low
Swanlake-----	25	---	---	Moderate	Low	Low
Nicollet-----	10	---	---	High	High	Low
Webster-----	3	---	---	High	High	Low
L100B:						
Clarion-----	45	---	---	Moderate	Low	Low
Estherville-----	35	---	---	Low	Low	Low
Lowlein-----	5	---	---	Moderate	Moderate	Low
Nicollet-----	5	---	---	High	High	Low
Swanlake-----	5	---	---	Moderate	Low	Low
Webster-----	5	---	---	High	High	Low
L101C2:						
Omsrud, eroded-----	40	---	---	Moderate	Low	Low
Hawick-----	30	---	---	Low	Low	Low
Storden, eroded-----	20	---	---	Moderate	Low	Low
Delft-----	5	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L101C2: Terril-----	5	---	---	Moderate	Moderate	Low
L101D2: Omsrud, eroded-----	40	---	---	Moderate	Low	Low
Hawick-----	25	---	---	Low	Low	Low
Storden, eroded-----	20	---	---	Moderate	Low	Low
Ridgeton-----	6	---	---	Moderate	Moderate	Low
Delft-----	5	---	---	High	High	Low
Terril-----	4	---	---	Moderate	Moderate	Low
L102C2: Omsrud, eroded-----	45	---	---	Moderate	Low	Low
Storden, eroded-----	25	---	---	Moderate	Low	Low
Omsrud-----	15	---	---	Moderate	Low	Low
Terril-----	10	---	---	Moderate	Moderate	Low
Delft-----	5	---	---	High	High	Low
L102D2: Omsrud, eroded-----	45	---	---	Moderate	Low	Low
Storden, eroded-----	20	---	---	Moderate	Low	Low
Omsrud-----	15	---	---	Moderate	Low	Low
Ridgeton-----	8	---	---	Moderate	Moderate	Low
Delft-----	6	---	---	High	High	Low
Terril-----	6	---	---	Moderate	Moderate	Low
L103A: Fieldon-----	50	---	---	High	High	Low
Canisteo-----	35	---	---	High	High	Low
Darfur-----	10	---	---	High	High	Low
Glencoe-----	5	---	---	High	High	Low
L105C2: Lester, eroded-----	45	---	---	Moderate	Low	Moderate
Hawick-----	35	---	---	Low	Low	Low
Terril-----	10	---	---	Moderate	Moderate	Low
Hamel-----	5	---	---	High	High	Low
Storden, eroded-----	5	---	---	Moderate	Low	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L105D2:						
Lester, eroded-----	45	---	---	Moderate	Low	Moderate
Hawick-----	35	---	---	Low	Low	Low
Ridgeton-----	8	---	---	Moderate	Moderate	Low
Hamel-----	5	---	---	High	High	Low
Storden, eroded-----	5	---	---	Moderate	Low	Low
Terril-----	2	---	---	Moderate	Moderate	Low
L106C2:						
Lester, eroded-----	62	---	---	Moderate	Low	Moderate
Storden, eroded-----	20	---	---	Moderate	Low	Low
Terril-----	10	---	---	Moderate	Moderate	Low
Hamel-----	5	---	---	High	High	Low
Reedslake-----	3	---	---	Moderate	Low	Low
L106D2:						
Lester, eroded-----	62	---	---	Moderate	Low	Moderate
Storden, eroded-----	20	---	---	Moderate	Low	Low
Ridgeton-----	10	---	---	Moderate	Moderate	Low
Terril-----	5	---	---	Moderate	Moderate	Low
Hamel-----	3	---	---	High	High	Low
L107A:						
Canisteo-----	50	---	---	High	High	Low
Glencoe-----	35	---	---	High	High	Low
Harps-----	10	---	---	High	High	Low
Canisteo, depressional	3	---	---	High	High	Low
Crippin-----	2	---	---	High	High	Low
L108A:						
Cordova-----	65	---	---	High	High	Low
Rolfe-----	30	---	---	High	High	Moderate
Le Sueur-----	5	---	---	High	High	Low
L109A:						
Marna-----	65	---	---	High	High	Low
Barbert-----	30	---	---	High	High	Low
Guckeen-----	5	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L110E:						
Lester-----	50	---	---	Moderate	Low	Moderate
Ridgeton-----	30	---	---	Moderate	Moderate	Low
Cokato-----	10	---	---	Moderate	Low	Low
Belview-----	6	---	---	Moderate	Low	Low
Hamel-----	2	---	---	High	High	Low
Terril-----	2	---	---	Moderate	Moderate	Low
L110F:						
Lester-----	55	---	---	Moderate	Low	Moderate
Ridgeton-----	30	---	---	Moderate	Moderate	Low
Cokato-----	8	---	---	Moderate	Low	Low
Belview-----	4	---	---	Moderate	Low	Low
Terril-----	2	---	---	Moderate	Moderate	Low
Hamel-----	1	---	---	High	High	Low
L111A:						
Nicollet-----	85	---	---	High	High	Low
Clarion-----	10	---	---	Moderate	Low	Low
Webster-----	5	---	---	High	High	Low
L112A:						
Webster-----	85	---	---	High	High	Low
Glencoe-----	10	---	---	High	High	Low
Nicollet-----	5	---	---	High	High	Low
L113B:						
Reedslake-----	75	---	---	Moderate	Low	Low
Le Sueur-----	10	---	---	High	High	Low
Reedslake, eroded-----	10	---	---	Moderate	Low	Low
Cordova-----	5	---	---	High	High	Low
L114A:						
Hanlon, rarely flooded	85	---	---	Moderate	Moderate	Low
Coland, occasionally flooded-----	10	---	---	High	High	Low
Minneopa, rarely flooded-----	5	---	---	Moderate	Low	Low
L115A:						
Brownnton-----	55	---	---	High	High	Low
Lura-----	35	---	---	High	High	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L115A: Marna-----	10	---	---	High	High	Low
L116A: Le Sueur-----	45	---	---	High	High	Low
Lerdal-----	40	---	---	High	High	High
Mazaska-----	10	---	---	High	High	Moderate
Kilkenny-----	5	---	---	High	Moderate	Moderate
L117C2: Omsrud, eroded-----	65	---	---	Moderate	Low	Low
Omsrud-----	15	---	---	Moderate	Low	Low
Terril-----	10	---	---	Moderate	Moderate	Low
Delft-----	5	---	---	High	High	Low
Storden, eroded-----	5	---	---	Moderate	Low	Low
L118A: Rushriver, frequently flooded-----	85	---	---	High	Moderate	Low
Houghton, frequently flooded-----	5	2-4	25-32	High	High	Moderate
Klossner, frequently flooded-----	5	2-4	25-32	High	High	Moderate
Medo, frequently flooded-----	5	2-4	25-32	High	High	Moderate
L119B: Angus-----	80	---	---	Moderate	Low	Moderate
Angus, eroded-----	10	---	---	Moderate	Low	Moderate
Cordova-----	5	---	---	High	High	Low
Le Sueur-----	5	---	---	High	High	Low
L120A: Good Thunder-----	80	---	---	High	High	Moderate
Ocheyedan-----	10	---	---	Moderate	Low	Low
Minnetonka-----	10	---	---	High	High	Low
L121B: Clarion-----	80	---	---	Moderate	Low	Low
Guckeen-----	15	---	---	High	High	Low
Marna-----	5	---	---	High	High	Low
L122B: Reedslake-----	55	---	---	Moderate	Low	Low
Estherville-----	25	---	---	Low	Low	Low

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L122B:						
Le Sueur-----	10	---	---	High	High	Low
Cordova-----	5	---	---	High	High	Low
Lowlein-----	5	---	---	Moderate	Moderate	Low
L123A:						
Belleville-----	85	---	---	High	High	Low
Granby-----	15	---	---	Moderate	High	Low
L124A:						
Glencoe mucky clay loam	85	---	---	High	High	Low
Canisteo-----	10	---	---	High	High	Low
Glencoe clay loam-----	5	---	---	High	High	Low
L125A:						
Hanlon, rarely flooded	60	---	---	Moderate	Moderate	Low
Coland, occasionally flooded-----	25	---	---	High	High	Low
Minneopa, rarely flooded-----	15	---	---	Moderate	Low	Low
L126A:						
Coland, occasionally flooded-----	80	---	---	High	High	Low
Minneopa, occasionally flooded-----	10	---	---	Moderate	Low	Low
Havelock, occasionally flooded-----	5	---	---	High	High	Low
Spillville, occasionally flooded--	5	---	---	Moderate	High	Moderate
L127A:						
Coland, frequently flooded-----	80	---	---	High	High	Low
Minneopa, occasionally flooded-----	10	---	---	Moderate	Low	Low
Havelock, frequently flooded-----	5	---	---	High	High	Low
Spillville, occasionally flooded--	5	---	---	Moderate	High	Moderate
L128A:						
Mazaska-----	60	---	---	High	High	Moderate
Rolfe-----	30	---	---	High	High	Moderate
Lerdal-----	10	---	---	High	High	High

Table 20.--Soil Features--Continued

Map symbol and component name	Pct. of map unit	Subsidence		Potential for frost action	Risk of corrosion	
		Initial	Total		Uncoated steel	Concrete
		In	In			
L129B:						
Terril-----	90	---	---	Moderate	Moderate	Low
Delft-----	5	---	---	High	High	Low
Hamel-----	5	---	---	High	High	Low
L130A:						
Okoboji mucky silty clay loam-----	75	---	---	High	High	Low
Okoboji silty clay loam-----	15	---	---	High	High	Low
Brownnton-----	5	---	---	High	High	Low
Spicer-----	5	---	---	High	High	Low
M-W. Water, miscellaneous						
U3B. Udorthents (cut and fill land)						
W. Water						

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Glossary

Ablation till. Loose, permeable till deposited during the final downwasting of glacial ice. Lenses of crudely sorted sand and gravel are common.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alluvium. Material, such as sand, silt, or clay, deposited on land by streams.

Alpha,alpha-dipyridyl. A dye that when dissolved in 1N ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction indicates a type of redoximorphic feature.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Aspect. The direction in which a slope faces.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and

generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Basal till. Compact glacial till deposited beneath the ice.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope. A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Beach deposits. Material, such as sand and gravel, that is generally laid down parallel to an active or relict shoreline of a postglacial or glacial lake.

Bedding planes. Fine strata, less than 5 millimeters thick, in unconsolidated alluvial, eolian, lacustrine, or marine sediment.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A shallow depression from which all or most of the soil material has been removed by the wind. A blowout has a flat or irregular floor formed by a resistant layer or by an accumulation of pebbles or cobbles. In some blowouts the water table is exposed.

Bog. Waterlogged, spongy ground, consisting

primarily of mosses, containing acidic, decaying vegetation (such as sphagnum, sedges, and heaths) that develops into peat.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material but have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. Very small, irregular terraces on steep hillsides, especially in pasture, formed by the trampling of cattle or the slippage of saturated soil.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay,

less than 45 percent sand, and less than 40 percent silt.

Clay depletions. Low-chroma zones having a low content of iron, manganese, and clay because of the chemical reduction of iron and manganese and the removal of iron, manganese, and clay. A type of redoximorphic depletion.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Soil material or rock fragments, or both, moved by creep, slide, or local wash and deposited at the base of steep slopes.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and

practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). Fecal material deposited in water by aquatic organisms.

Corrosion. Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Crop residue management. Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Decreasers. The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is nearly flat and fan shaped; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depression. Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.

Disintegration moraine. A drift topography characterized by chaotic mounds and pits, generally randomly oriented, developed in supraglacial drift by collapse and flow as the underlying stagnant ice melted. Slopes may be steep and unstable. Abrupt changes between materials of differing lithology are common.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained*. These classes are defined in the "Soil Survey Manual."

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A relatively small, linear depression that, at some time, moves concentrated water and either does not have a defined channel or has only a small defined channel.

Drumlin. A low, smooth, elongated oval hill, mound, or ridge of compact glacial till. The longer axis is

parallel to the path of the glacier and commonly has a blunt nose pointing in the direction from which the ice approached.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

End moraine. A ridgelike accumulation that is being or was produced at the outer margin of an actively flowing glacier at any given time.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Eolian soil material. Earthy parent material accumulated through wind action; commonly refers to sandy material in dunes or to loess in blankets on the surface.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A layer of gravel or stones that remains on the surface after fine particles are removed by sheet or rill erosion.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Synonym: scarp.

Esker. A narrow, winding ridge of stratified gravelly and sandy drift deposited by a stream flowing in a tunnel beneath a glacier.

Fan terrace. A relict alluvial fan, no longer a site of active deposition, incised by younger and lower alluvial surfaces.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. The normal flood plain of a stream, subject to frequent or occasional flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. A nearly level alluvial plain that borders a stream and is subject to flooding unless protected artificially.

Footslope. The position that forms the inner, gently inclined surface at the base of a hillslope. In profile, footslopes are commonly concave. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Frost action (in tables). Freezing and thawing of soil moisture. Frost action can damage roads, buildings and other structures, and plant roots.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Geomorphology. The science that treats the general configuration of the earth's surface; specifically, the study of the classification, description, nature, origin, and development of landforms and their relationships to underlying structures, and the history of geologic changes as recorded by these surface features. The term is especially applied to the genetic interpretation of landforms.

Glacial drift. Pulverized and other rock material transported by glacial ice and then deposited. Also, the sorted and unsorted material deposited by streams flowing from glaciers.

Glacial outwash. Gravel, sand, and silt, commonly stratified, deposited by glacial meltwater.

Glacial till. Unsorted, nonstratified glacial drift consisting of clay, silt, sand, and boulders transported and deposited by glacial ice.

Glaciofluvial deposits. Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur as kames, eskers, deltas, and outwash plains.

Glaciolacustrine deposits. Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are interbedded or laminated.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A miniature valley with steep sides cut by running water and through which water ordinarily runs only after rainfall. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Head slope. A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

Herbaceous peat. An accumulation of organic material, decomposed to some degree, that is predominantly the remains of sedges, reeds, cattails, and other herbaceous plants.

High-chroma zones. Zones having chroma of 3 or more. Typical color in areas of iron concentrations.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A natural elevation of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline; hillsides generally have slopes of more than 15 percent. The distinction between a hill and a mountain is arbitrary and is dependent on local usage.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Ice-walled lake plain. A relict surface marking the floor of an extinct lake basin that was formed on solid ground and surrounded by stagnant ice in a stable or unstable superglacial environment on stagnation moraines. As the ice melted, the lake plain became perched above the adjacent landscape. The lake plain is well sorted, generally fine textured, stratified deposits.

Igneous rock. Rock formed by solidification from a molten or partially molten state. Major varieties include plutonic and volcanic rock. Examples are andesite, basalt, and granite.

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Increasesers. Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasesers commonly are the shorter plants and the less palatable to livestock.

Infiltration. The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a

constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluv. An elevated area between two drainageways that sheds water to those drainageways.

Intermittent stream. A stream, or reach of a stream, that flows for prolonged periods only when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Invaders. On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

Iron concentrations. High-chroma zones having a high content of iron and manganese oxide because of chemical oxidation and accumulation, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic concentration.

Iron depletions. Low-chroma zones having a low content of iron and manganese oxide because of chemical reduction and removal, but having a clay content similar to that of the adjacent matrix. A type of redoximorphic depletion.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Kame. An irregular, short ridge or hill of stratified glacial drift.

Kame moraine. An end moraine that contains numerous kames. A group of kames along the front of a stagnant glacier, commonly comprising the slumped remnants of a formerly continuous outwash plain built up over the foot of rapidly wasting or stagnant ice.

Karst (topography). The relief of an area underlain by limestone that dissolves in differing degrees, thus forming numerous depressions or small basins.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat} . Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake bed. The bottom of a lake; a lake basin.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Lakeshore. A narrow strip of land in contact with or bordering a lake; especially the beach of a lake.

Lamella. A thin (commonly less than 1 cm thick), discontinuous or continuous, generally horizontal layer of fine material (especially clay and iron oxides) that has been pedogenically concentrated (illuviated within a coarser textured eluviated layer several centimeters to several decimeters thick).

Landslide. The rapid downhill movement of a mass of soil and loose rock, generally when wet or saturated. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $1/3$ - or $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Fine grained material, dominantly of silt-sized particles, deposited by wind.

Low strength. The soil is not strong enough to support loads.

Low-chroma zones. Zones having chroma of 2 or less. Typical color in areas of iron depletions.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal amounts.

Masses. Concentrations of substances in the soil matrix that do not have a clearly defined boundary with the surrounding soil material and cannot be removed as a discrete unit. Common compounds making up masses are calcium carbonate, gypsum or other soluble salts, iron oxide, and manganese oxide. Masses consisting of iron oxide or manganese oxide generally are considered a type of redoximorphic concentration.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement. Nearly all such rocks are crystalline.

Mineral soil. Soil that is mainly mineral material and

low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. An area that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Moraine. An accumulation of earth, stones, and other debris deposited by a glacier. Some types are terminal, lateral, medial, and ground.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mucky peat. Unconsolidated soil material consisting primarily of organic matter that is in an intermediate stage of decomposition such that a significant part of the material can be recognized and a significant part of the material cannot be recognized.

Mudstone. Sedimentary rock formed by induration of silt and clay in approximately equal amounts.

Munsell notation. A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. Cemented bodies lacking visible internal structure. Calcium carbonate, iron oxide, and manganese oxide are common compounds

making up nodules. If formed in place, nodules of iron oxide or manganese oxide are considered types of redoximorphic concentrations.

Nose slope. A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent.

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Outwash plain. A landform of mainly sandy or coarse textured material of glaciofluvial origin. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A thin layer of alluvial material that mantles an erosion surface and has been transported to its present position from higher lying areas of the erosion surface.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The

rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch
Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitted outwash plain. An outwash plain marked by many irregular depressions, such as kettles, shallow pits, and potholes, which formed by melting of incorporated ice masses; common in Wisconsin and Minnesota.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau. An extensive upland mass with relatively flat summit area that is considerably elevated (more than 100 meters) above adjacent lowlands and separated from them on one or more sides by escarpments.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed in pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Redoximorphic concentrations. Nodules, concretions, soft masses, pore linings, and other features resulting from the accumulation of iron or manganese oxide. An indication of chemical reduction and oxidation resulting from saturation.

Redoximorphic depletions. Low-chroma zones from which iron and manganese oxide or a combination of iron and manganese oxide and clay has been removed. These zones are indications of the chemical reduction of iron resulting from saturation.

Redoximorphic features. Redoximorphic

concentrations, redoximorphic depletions, reduced matrices, a positive reaction to alpha,alpha-dipyridyl, and other features indicating the chemical reduction and oxidation of iron and manganese compounds resulting from saturation.

Reduced matrix. A soil matrix that has low chroma in situ because of chemically reduced iron (Fe II). The chemical reduction results from nearly continuous wetness. The matrix undergoes a change in hue or chroma within 30 minutes after exposure to air as the iron is oxidized (Fe III). A type of redoximorphic feature.

Regolith. The unconsolidated mantle of weathered rock and soil material on the earth's surface; the loose earth material above the solid rock.

Relief. The elevations or inequalities of a land surface, considered collectively.

Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as consolidated rock disintegrated in place.

Rill. A steep-sided channel resulting from accelerated erosion. A rill generally is a few inches deep and not wide enough to be an obstacle to farm machinery.

Rise. A slight increase in elevation of the land surface, typically with a broad summit and gently sloping sides.

Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

Root zone. The part of the soil that can be penetrated by plant roots.

Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

Sand. As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

Sandstone. Sedimentary rock containing dominantly sand-sized particles.

Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has

the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

Saprolite. Unconsolidated residual material underlying the soil and grading to hard bedrock below.

Saturated hydraulic conductivity (K_{sat}). See Permeability.

Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

Second bottom. The first terrace above the normal flood plain (or first bottom) of a river.

Sedimentary rock. Rock made up of particles deposited from suspension in water. The chief kinds of sedimentary rock are conglomerate, formed from gravel; sandstone, formed from sand; shale, formed from clay; and limestone, formed from soft masses of calcium carbonate. There are many intermediate types. Some wind-deposited sand is consolidated into sandstone.

Seepage (in tables). The movement of water through the soil adversely affects the specified use.

Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

Shale. Sedimentary rock formed by the hardening of a clay deposit.

Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The position that forms the uppermost inclined surface near the top of a hillslope. It is a transition from backslope to summit. The surface is dominantly convex in profile and erosional in origin.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Side slope. A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. Sedimentary rock made up of dominantly silt-sized particles.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A depression in the landscape where limestone has been dissolved.

Slickensides. Polished and grooved surfaces produced by one mass sliding past another. In soils, slickensides may occur at the bases of slip surfaces on the steeper slopes; on faces of blocks, prisms, and columns; and in swelling clayey soils, where there is marked change in moisture content.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.

Sloughed till. Water-saturated till that has flowed slowly downhill from its original place of deposit by glacial ice. It may rest on other till, on glacial outwash, or on a glaciolacustrine deposit.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging

between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Stagnation moraine. A body of drift released by the melting of a glacier that ceased flowing. Commonly, but not always, occurs near ice margins; composed of till, ice-contact stratified drift, and small areas of glacial lake sediment. Typical landforms are knob-and-kettle topography, locally including ice-walled lake plains.

Stone line. A concentration of rock fragments in a soil. Generally, it is indicative of an old weathered surface. In a cross section, the line may be one fragment or more thick. It generally overlies material that weathered in place and is overlain by recent sediment of variable thickness.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after

harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsidence. The potential decrease in surface elevation as a result of the drainage of wet soils that have organic layers or semifluid mineral layers. Subsidence, as a result of drainage, is attributed to (1) shrinkage from drying, (2) consolidation because of the loss of ground-water buoyancy, (3) compaction from tillage or manipulation, (4) wind erosion, (5) burning, and (6) biochemical oxidation.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter or loosen a layer that restricts roots.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Swale. A slight depression in the midst of generally level land. A shallow depression in an undulating ground moraine caused by uneven glacial deposition.

Terminal moraine. A belt of thick glacial drift that generally marks the termination of important glacial advances.

Terrace. An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geologic). An old alluvial plain, ordinarily flat or undulating, bordering a river, a lake, or the sea.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand*, *loamy sand*, *sandy loam*, *loam*, *silt loam*, *silt*, *sandy clay loam*, *clay*

loam, silty clay loam, sandy clay, silty clay, and clay. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Till plain. An extensive area of nearly level to undulating soils underlain by glacial till.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The position that forms the gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Upland. Land at a higher elevation, in general, than the alluvial plain or stream terrace; land above the lowlands along streams.

Valley fill. In glaciated regions, material deposited in stream valleys by glacial meltwater. In nonglaciated regions, alluvium deposited by heavily loaded streams.

Variiegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

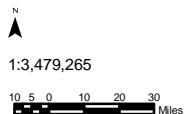
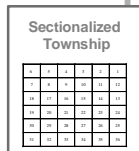
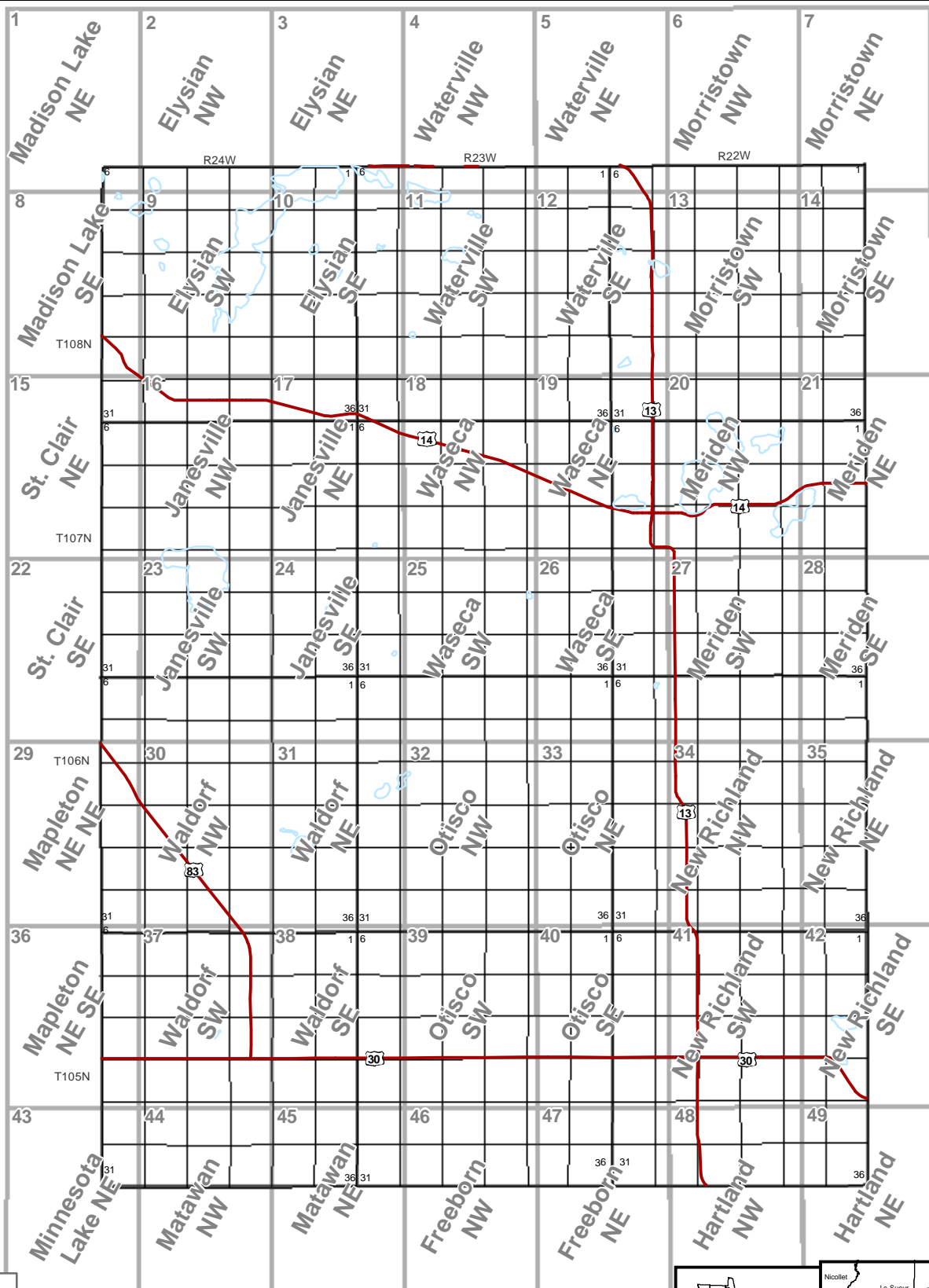
Weathering. All physical and chemical changes produced in rocks or other deposits at or near the earth's surface by atmospheric agents. These changes result in disintegration and decomposition of the material.

Well graded. Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

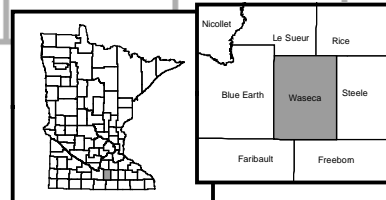
Wilting point (or permanent wilting point). The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Woody peat. An accumulation of organic material that is predominantly composed of trees, shrubs, and other woody plants.



WASECA COUNTY, MN **INDEX TO MAP SHEETS**



Definitions of Special Symbols
Soil Survey of Waseca County, Minnesota

Symbol	Definition
Escarpment (nonbedrock)	A relatively continuous cliff or steep slope breaking the general continuity of more gently sloping land surfaces. The side slopes may be undeveloped or poorly developed soil material.
Disturbed/reclaimed land	An area in which the soil profile has been disturbed by cutting, filling, or shaping. Typically 1/2 acre to 2 acres.
Gravel pit	An open excavation from which soil and the loose underlying material have been removed and used as a source of sand or gravel. Typically 1/2 acre to 2 acres.
Gravelly spot	An area of soil in which the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter; surrounded by soil that has less than 15 percent rock fragments. Typically 1/2 acre to 2 acres.
Knoll of better drained soil	A knoll of better drained soil that typically is within an area of poorly drained or very poorly drained soil. Typically 1/2 acre to 2 acres.
Marsh or swamp	A water-saturated, very poorly drained area, intermittently or permanently covered by water. The vegetation is dominantly sedges, cattails, and rushes. Typically 1/2 acre to 2 acres.
Mineral fill on organic soil	An area of organic soil in which mineral fill has been mechanically placed on the surface. Typically 1/2 acre to 2 acres.
Organic spot	An area in which 6 to 10 inches of organic material is on the surface. Typically 1/2 acre to 2 acres.
Sandy spot	An area of soil that has a surface layer of loamy fine sand or coarser and that is surrounded by soils that have a surface layer of very fine sandy loam or finer. Typically 1/2 acre to 2 acres.
Seep spot	A sloping area on the landscape that discharges ground water. Typically stays wet year round. May contain springs and small pockets of shallow water. Typically 1/2 acre to 2 acres.
Short steep slope	A narrow area of soil in which the slopes are at least two slope classes steeper than those of the surrounding soil or soils.
Wet depression, restricted permeability	A very poorly drained, shallow concave area on the landscape in which water is ponded seasonally. Typically 1/2 acre to 2 acres.

Conventional and Special Symbols Legend

Soil Survey of Waseca County, Minnesota

Description

Symbol

BOUNDARIES

County or parish



Field sheet matchline
and neatline



State coordinate tick



Public Land Survey System
section boundary (white line)



Land division corners



Geographic coordinate
tick



ROADS

Federal



State



AD HOC SOIL SYMBOLS

Mineral fill on organic soil



Disturbed/reclaimed land



Wet depression, restricted
permeability



Organic spot



Seep spot



Knoll of better drained soil

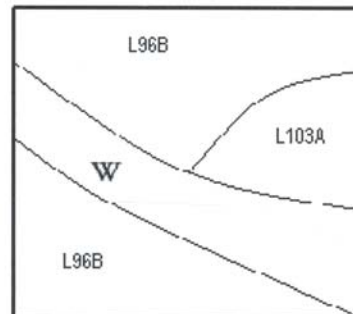


Description

Symbol

SPECIAL SYMBOLS FOR SOIL SURVEY

Soil delineations
and symbols



LANDFORM FEATURES

Escarpment (other than
bedrock)



Short steep slope



EXCAVATIONS

Gravel pit



MISCELLANEOUS SURFACE FEATURES

Gravelly spot



Marsh or swamp



Sandy spot

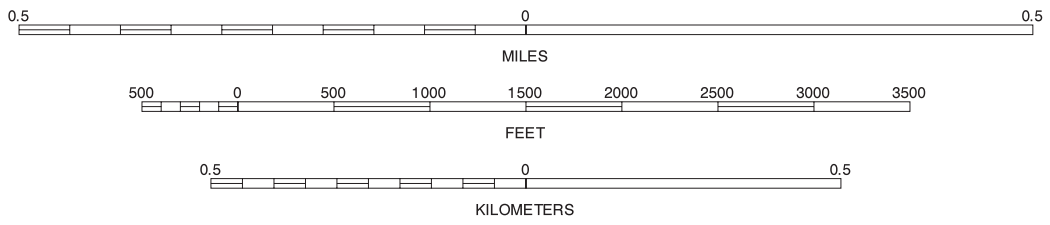




This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

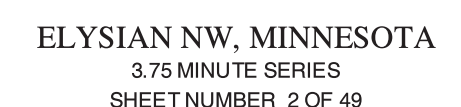
North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

NORTH



MADISON LAKE NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 1 OF 49

WASECA COUNTY, MINNESOTA
ELYSIAN NW QUADRANGLE
SHEET NUMBER 2 OF 49
93° 41'15"

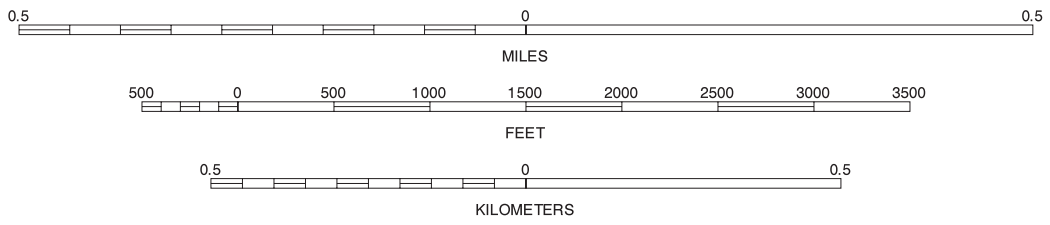




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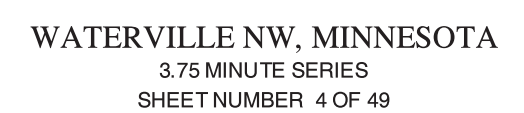
NORTH

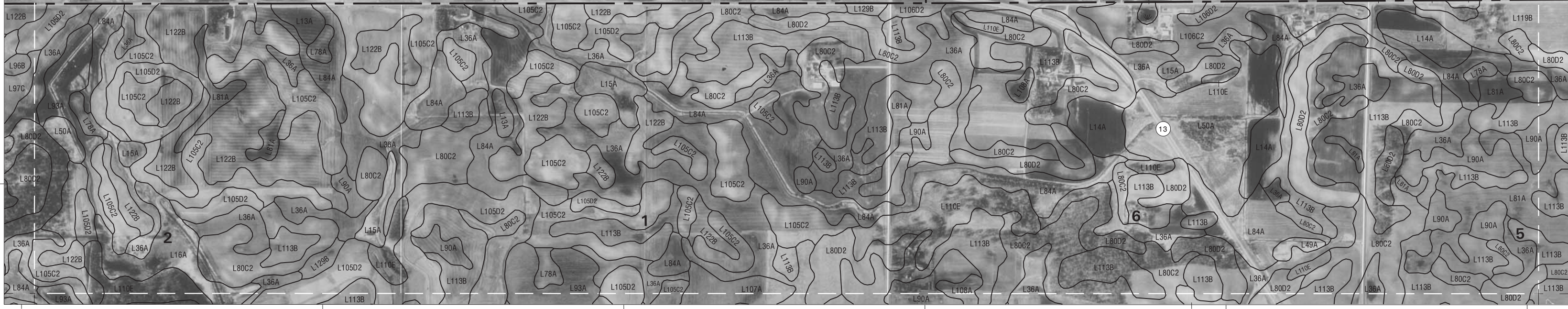


QUARTER QUADRANGLE
LOCATION

ELYSIAN NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 3 OF 49

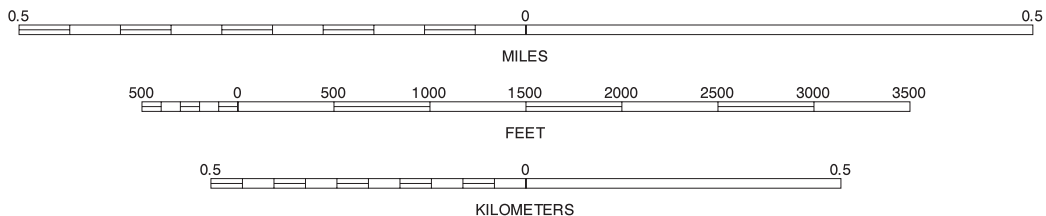
WASECA COUNTY, MINNESOTA
WATERVILLE NW QUADRANGLE
SHEET NUMBER 4 OF 49





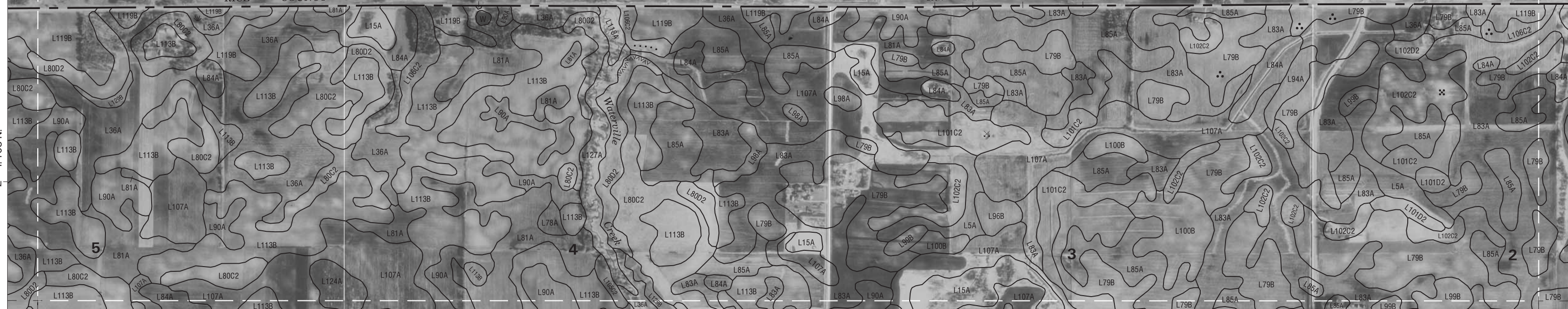
This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



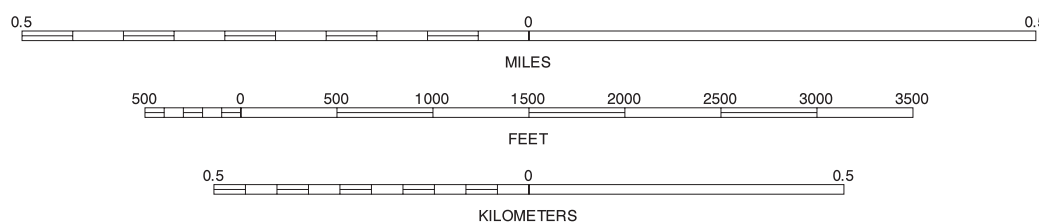
WATERVILLE NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 5 OF 49

93°30'00" 93°26'15" 4600000 E 461 462 463 464 4650000 E



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



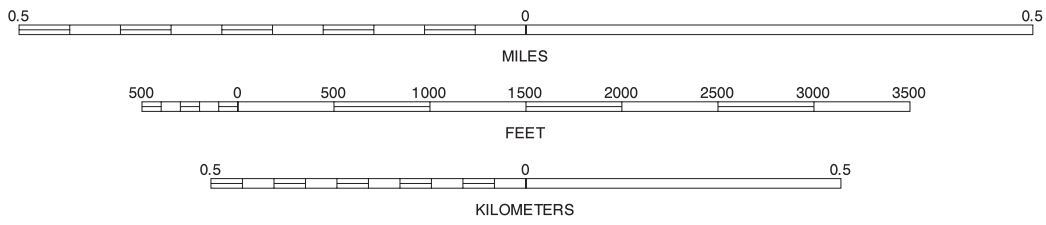
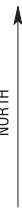
QUARTER QUADRANGLE LOCATION

MORRISTOWN NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 6 OF 49



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



MORRISTOWN NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 7 OF 49

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WASECA COUNTY, MINNESOTA
MADISON LAKE SE QUADRANGLE
SHEET NUMBER 8 OF 49

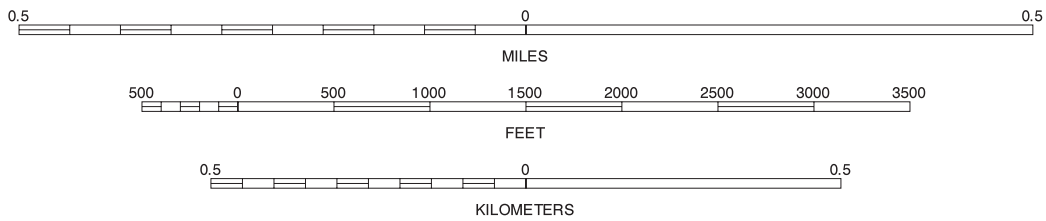
Joins sheet 1, Madison Lake NE



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NORTH



QUARTER QUADRANGLE
LOCATION

MADISON LAKE SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 8 OF 49

Joins sheet 9, Elyasin SW

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WASECA COUNTY, MINNESOTA
ELYSIAN SW QUADRANGLE
SHEET NUMBER 9 OF 49

Joins sheet 2, Elysian NW

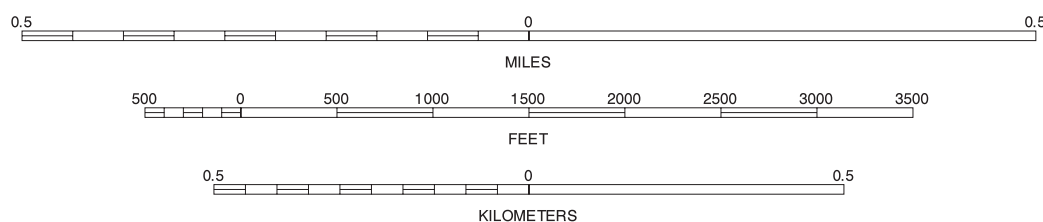
R. 24 W

Joins sheet 16, Janesville NW

SCALE 1:12000

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

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QUARTER QUADRANGLE LOCATION

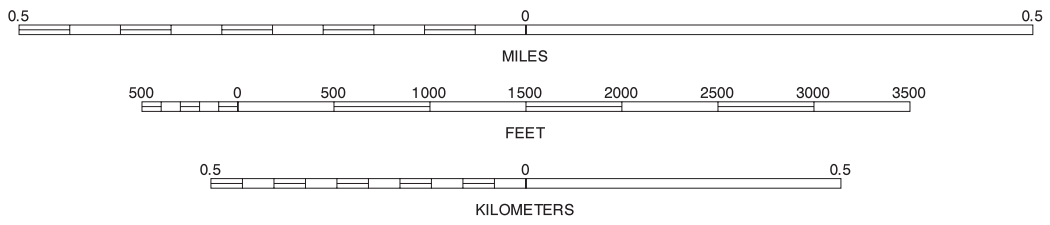
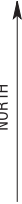
ELYSIAN SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 9 OF 49

Joins sheet 3, Elysian NE

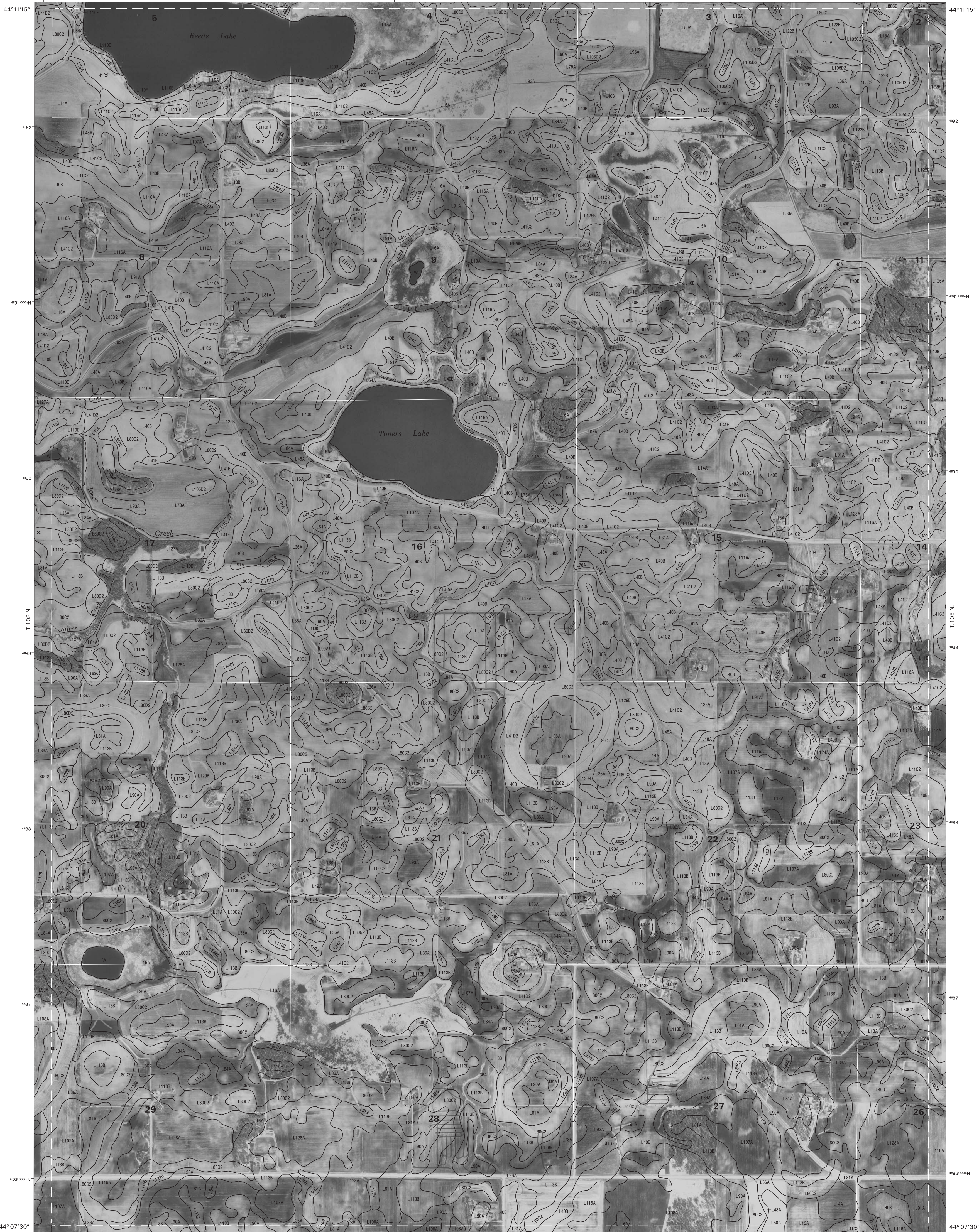


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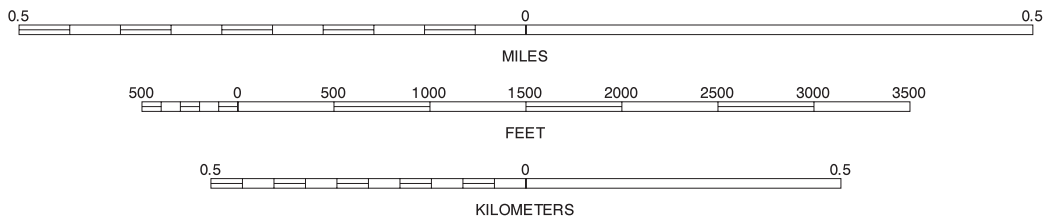


ELYSIAN SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 10 OF 49



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WATERVILLE SW, MINNESOTA
3.75-MINUTE SERIES
SHEET NUMBER 11 OF 49

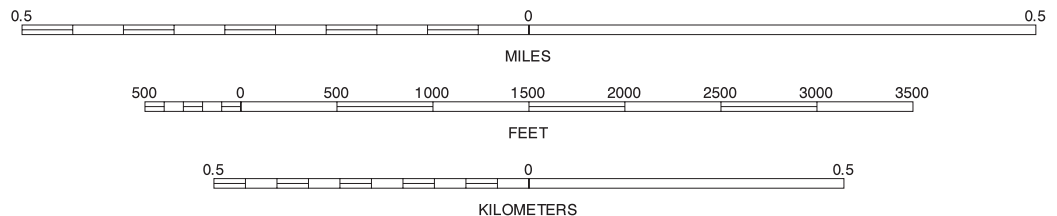
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WASECA COUNTY, MINNESOTA
WATERVILLE SE QUADRANGLE
SHEET NUMBER 12 OF 49

Joins sheet 5, Waterville NE



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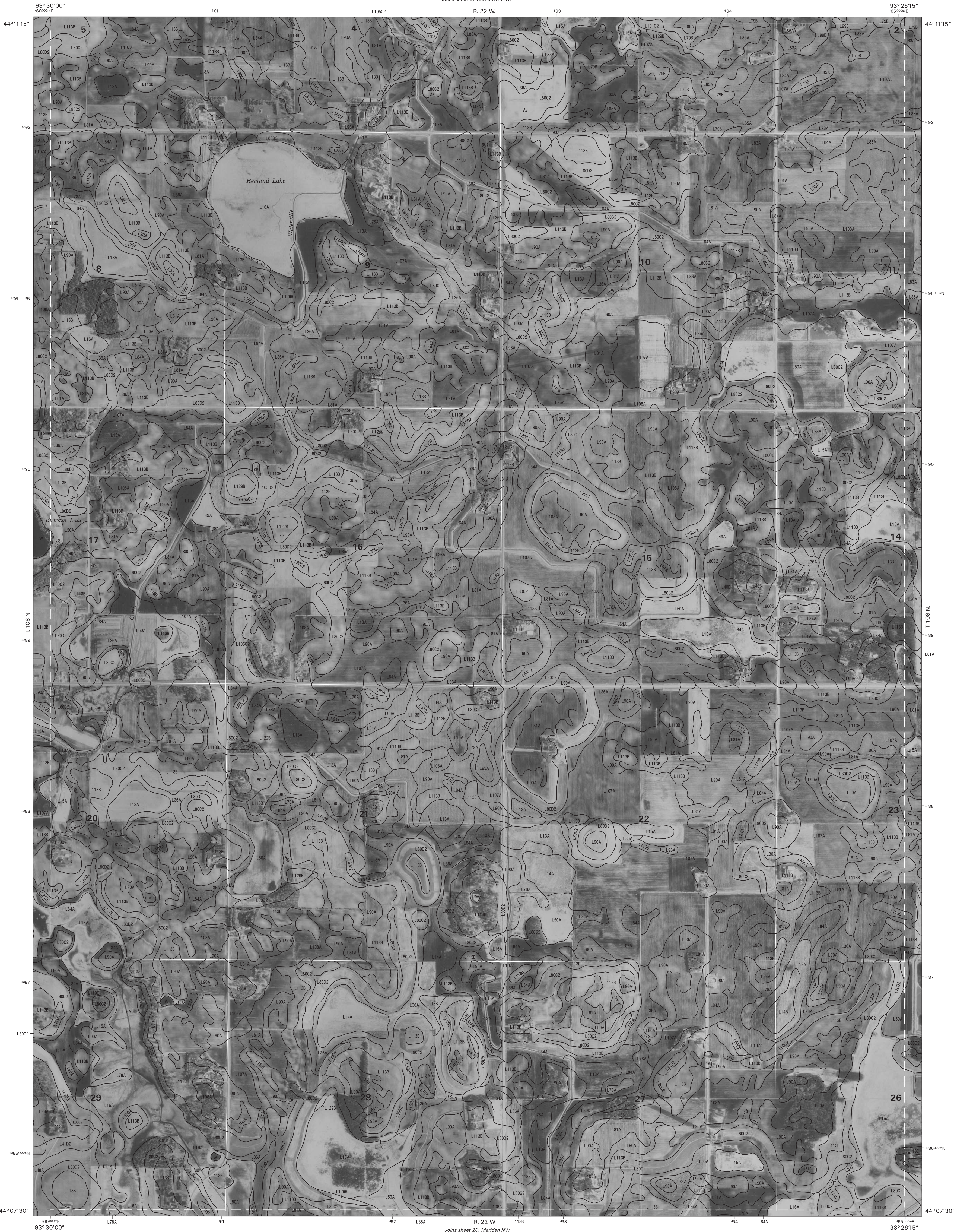


WATERVILLE SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 12 OF 49

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

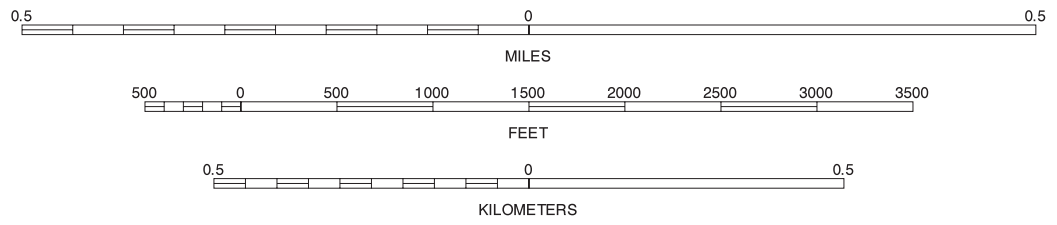
WASECA COUNTY, MINNESOTA
MORRISTOWN SW QUADRANGLE
SHEET NUMBER 13 OF 49

Jains sheet 6, Morristown NW



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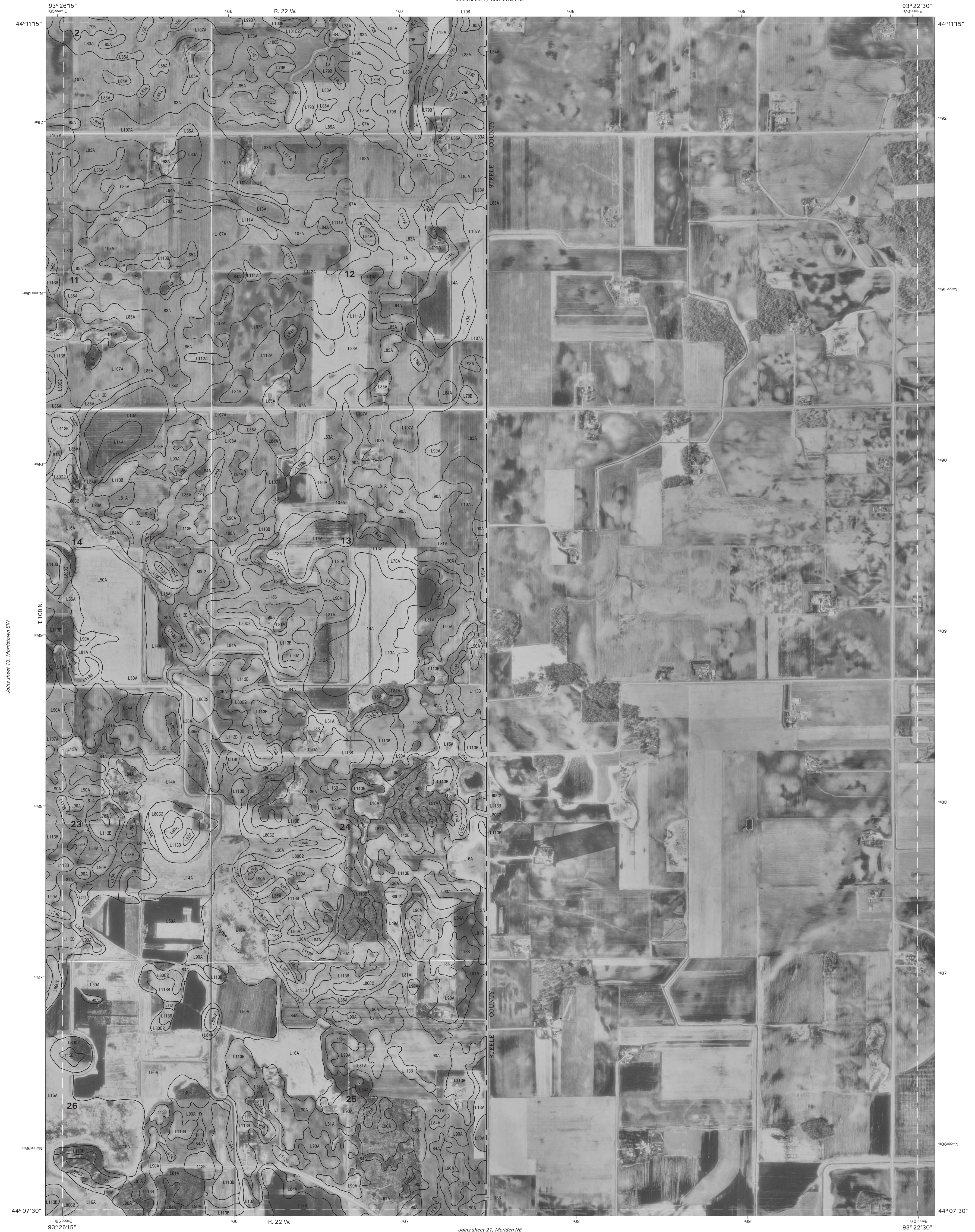


QUARTER QUADRANGLE LOCATION

MORRISTOWN SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 13 OF 49

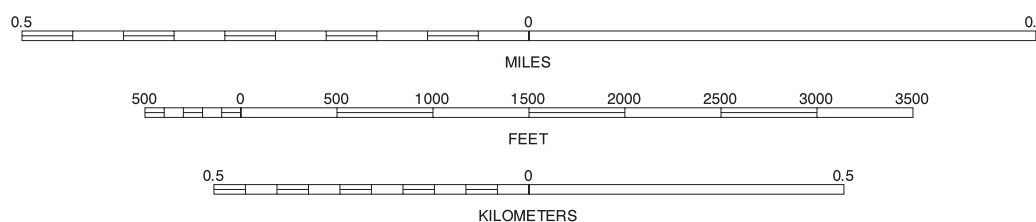
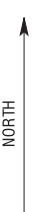
WASECA COUNTY, MINNESOTA
MORRISTOWN SE QUADRANGLE
SHEET NUMBER 14 OF 49

Joins sheet 7, Morristown NE



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QUARTER QUADRANGLE
LOCATION

MORRISTOWN SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 14 OF 49

WASECA COUNTY, MINNESOTA
SAINT CLAIR NE QUADRANGLE
SHEET NUMBER 15 OF 49

R. 24 W.

93° 45' 00"
4000m E



North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
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are available for this quadrangle.

SCALE 1:12000

QUARTER QUADRANGLE
LOCATION

SAINT CLAIR NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 15 OF 49

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WASECA COUNTY, MINNESOTA
JANESVILLE NW QUADRANGLE
SHEET NUMBER 16 OF 49

Joins sheet 9, Elysian SW

93° 45' 00" E
4400000

L48A

441

L41C2

L41C2

442

R. 24 W.

443

L80C2

444

93° 41' 15" E
4450000

44° 07' 30"

44° 07' 30"

T. 107 N. | T. 108 N.

T. 107 N. | T. 108 N.

Joins sheet 15, Saint Clair NE

Joins sheet 17, Janesville NE

44° 03' 45"

44° 03' 45"

93° 45' 00" E
4400000

441

442

R. 24 W.

443

L91A

93° 41' 15" E
4450000

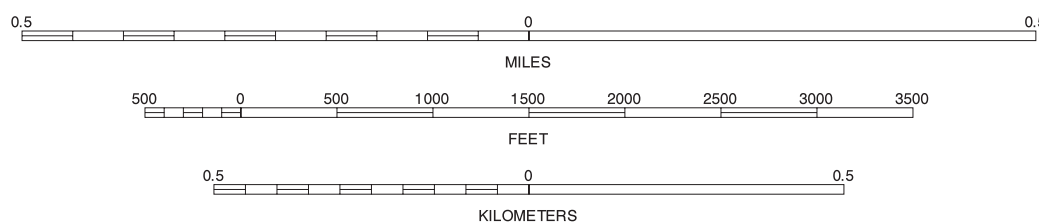
Joins sheet 23, Janesville SW

SCALE 1:12000

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NORTH



QUARTER QUADRANGLE
LOCATION

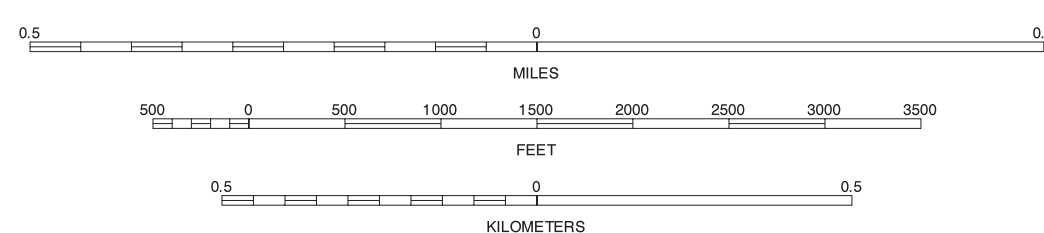
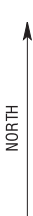
JANESVILLE NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 16 OF 49

WASECA COUNTY, MINNESOTA
JANESVILLE NE QUADRANGLE
SHEET NUMBER 17 OF 49

Joins sheet 24, Janesville SE

JANESVILLE NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 17 OF 49

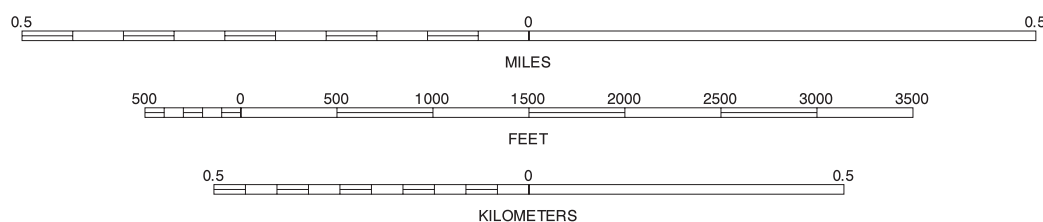
North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
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QUARTER QUADR
LOCATION



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

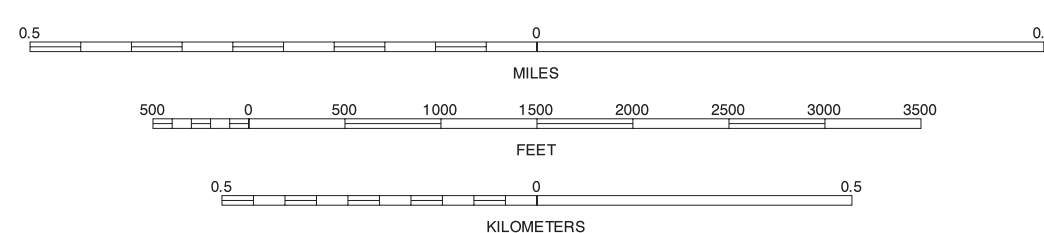


QUARTER QUADRANGLE
LOCATION

WASECA NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 18 OF 49

WASECA COUNTY, MINNESOTA
WASECA NE QUADRANGLE
SHEET NUMBER 19 OF 49

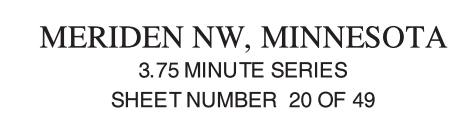
North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
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QUARTER QUADR
LOCATION

WASECA NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 19 OF 49

WASECA COUNTY, MINNESOTA
MERIDEN NW QUADRANGLE
SHEET NUMBER 20 OF 49

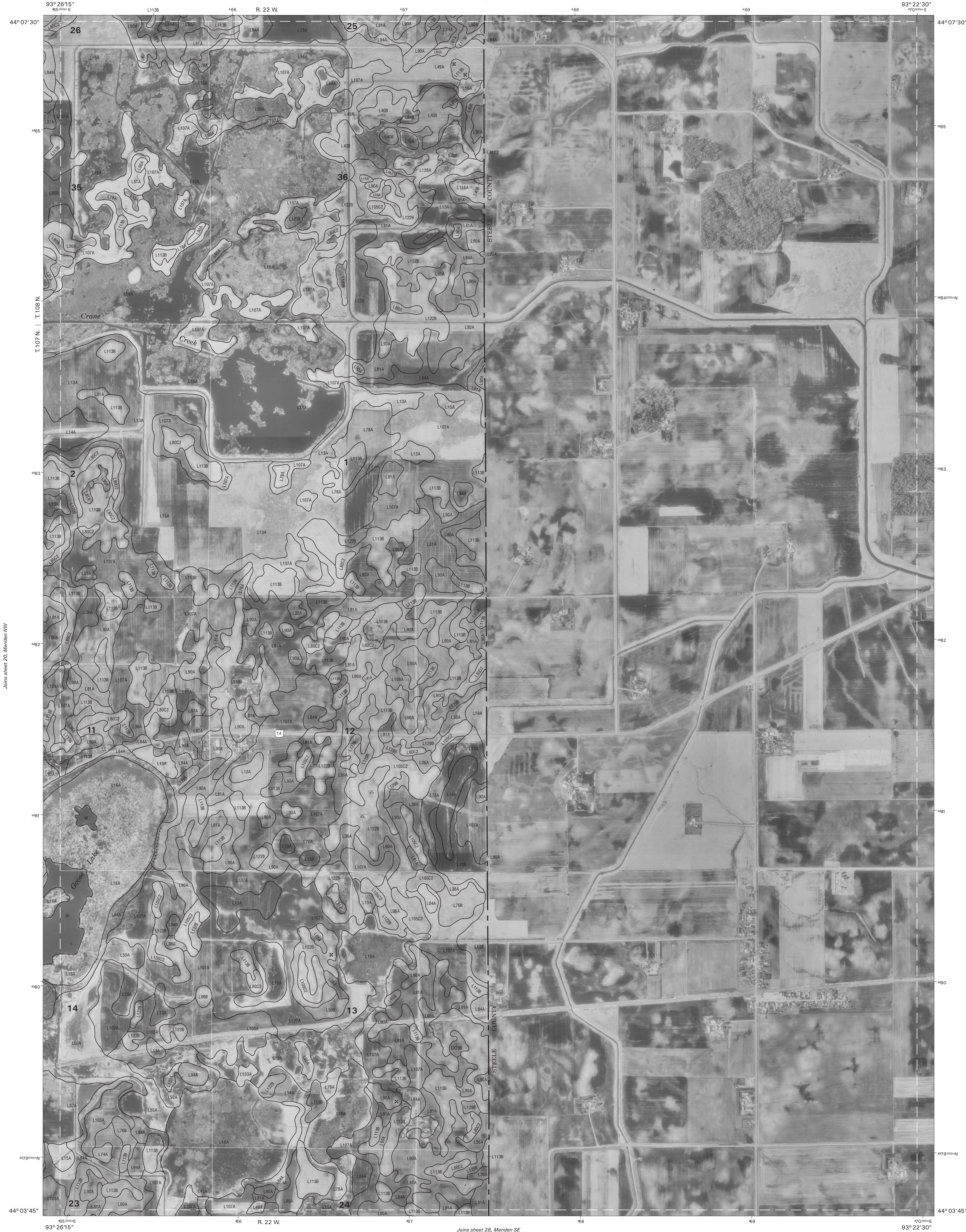
R. 22 W.



UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

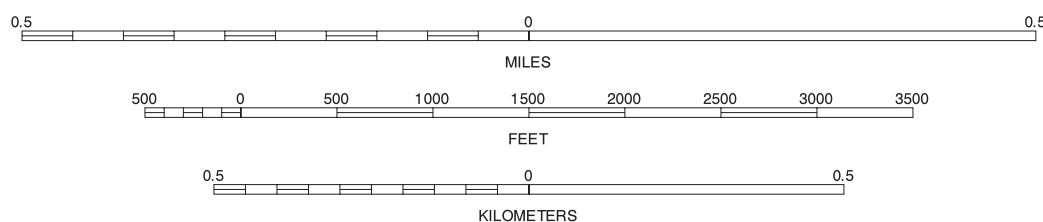
Joins sheet 14, Morristown SE

WASECA COUNTY, MINNESOTA
MERIDEN NE QUADRANGLE
SHEET NUMBER 21 OF 49



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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUARTER QUADRANGLE
LOCATION

MERIDEN NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 21 OF 49

Joins sheet 15, Saint Clair NE

R. 24 W.

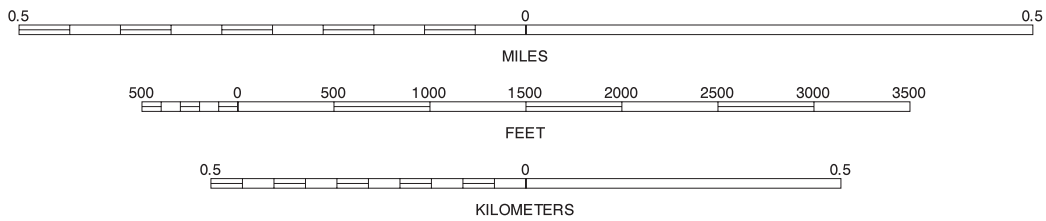


Joins sheet 23, Jamesville SW

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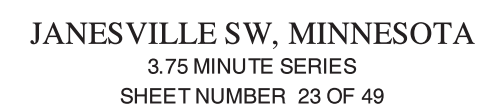
NORTH



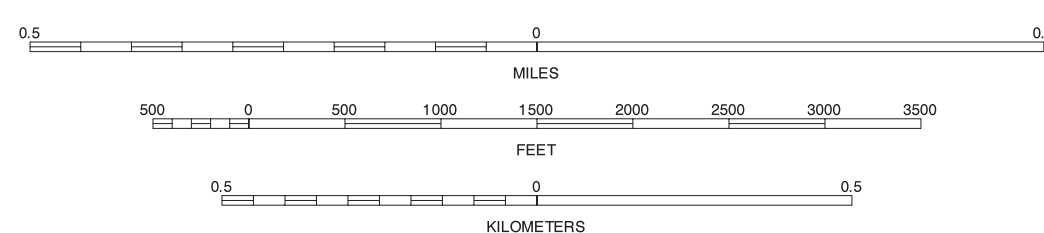
SAINT CLAIR SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 22 OF 49

WASECA COUNTY, MINNESOTA
JANESVILLE SW QUADRANGLE
SHEET NUMBER 23 OF 49

R. 24 W.



North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
beyond the dashed white quadrangle neckline are for reference
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QUARTER QUADRANGLE
LOCATION



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JANESVILLE SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 24 OF 49

Joins sheet 18, Waseca NW

R. 23 W.

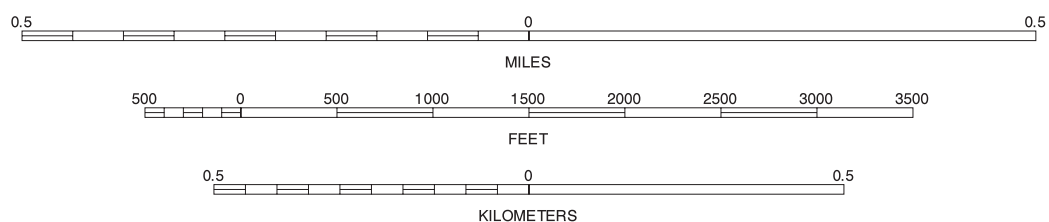
Joins sheet 32, Orisko NW

SCALE 1:12000

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North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

NORTH



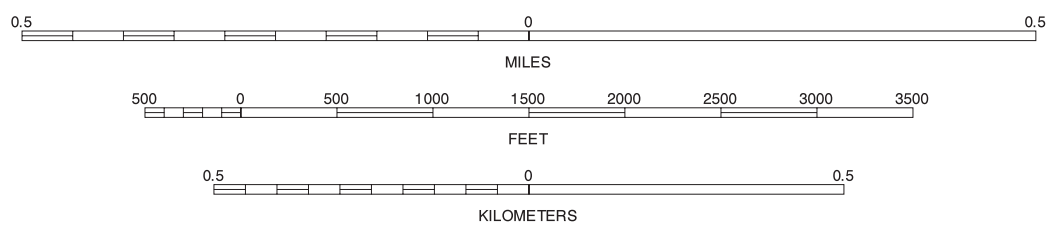
QUARTER QUADRANGLE
LOCATION

WASECA SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 25 OF 49



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

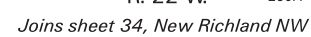


QUARTER QUADRANGLE
LOCATION

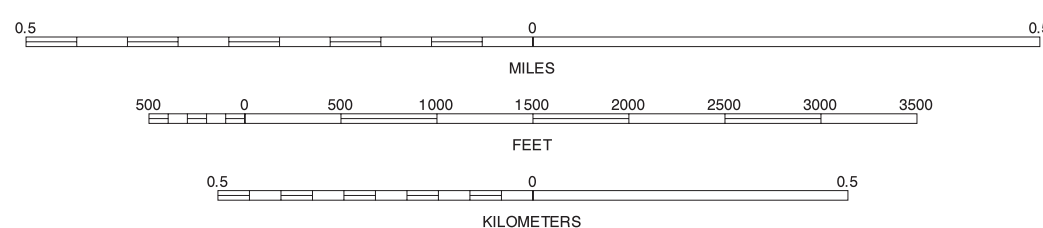
WASECA SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 26 OF 49

WASECA COUNTY, MINNESOTA
MERIDEN SW QUADRANGLE
SHEET NUMBER 27 OF 49

R. 22



North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
beyond the dashed white quadrangle neckline are for reference
only and are included on adjacent map sheets. Digital data
are available for this quadrangle.

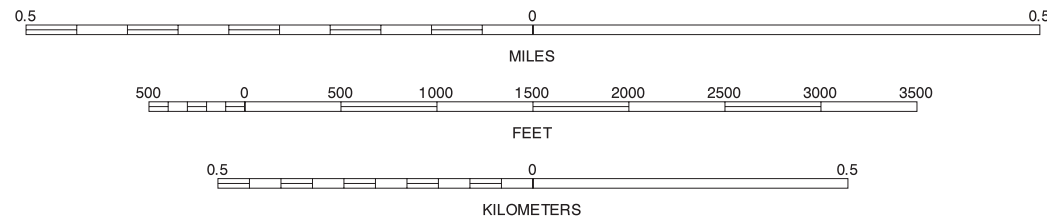


MERIDEN SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 27 OF 49



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle headline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



MERIDEN SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 28 OF 49

WASECA COUNTY, MINNESOTA
MAPLETON NE NE QUADRANGLE
SHEET NUMBER 29 OF 49

R. 24 W.

93° 45' 00"



North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

SCALE 1:12000

QUARTER QUADRANGLE
LOCATION

MAPLETON NE NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 29 OF 49

WASECA COUNTY, MINNESOTA
WALDORF NW QUADRANGLE
SHEET NUMBER 30 OF 49

Joins sheet 23, Janesville SW

R. 24 W.



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North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
beyond the dashed white quadrangle neatline are for reference
only and are included on adjacent map sheets. Digital data
are available for this quadrangle.

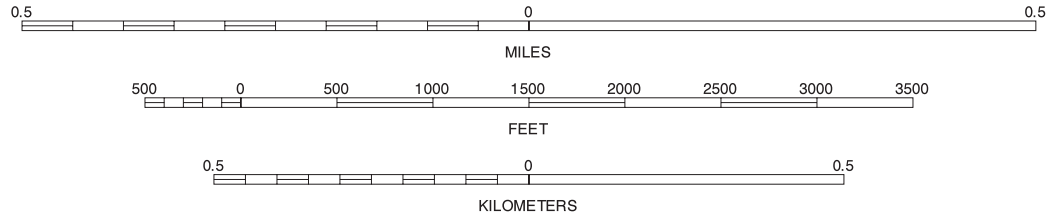
WALDORF NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 30 OF 49

QUARTER QUADRANGLE
LOCATION



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

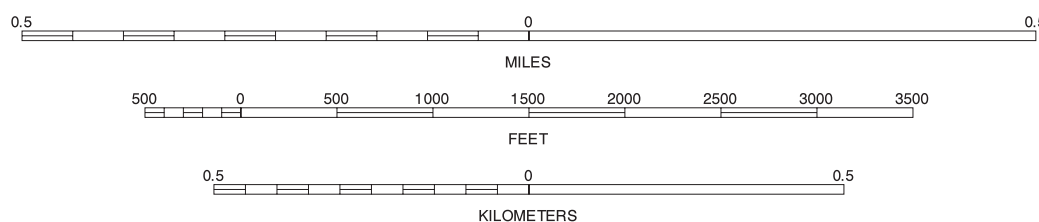
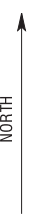


WALDORF NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 31 OF 49

WASECA COUNTY, MINNESOTA
OTISCO NW QUADRANGLE
SHEET NUMBER 32 OF 49

[illegible]

North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
beyond the dashed white quadrangle neatline are for reference
only and are included on adjacent map sheets. Digital data
are available for this quadrangle.

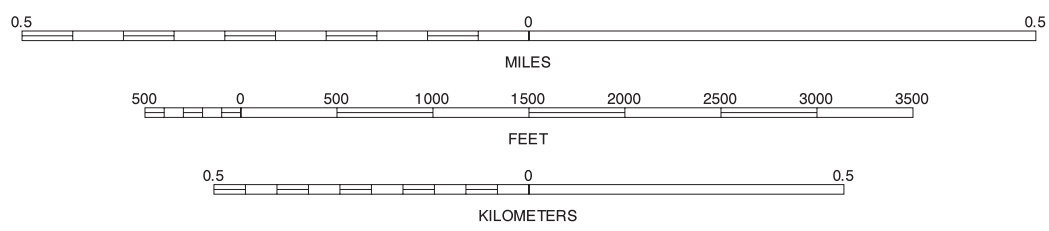
QUARTER QUADRANGLE
LOCATION

OTISCO NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 32 OF 49



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



OTISCO NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 33 OF 49

Joins sheet 27, Meriden SW

R. 22 W.

Joins sheet 41, New Richland SW

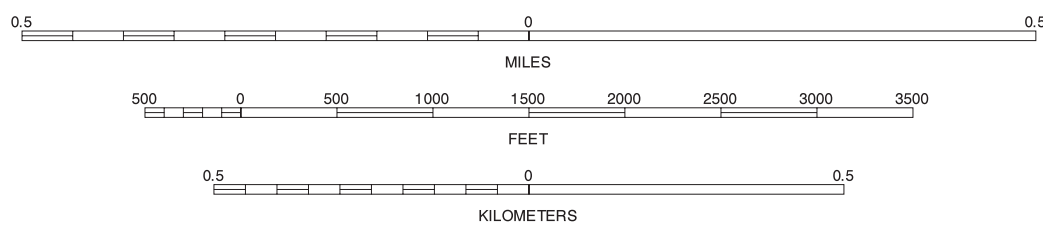
SCALE 1:12000

NEW RICHLAND NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 34 OF 49

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

NORTH

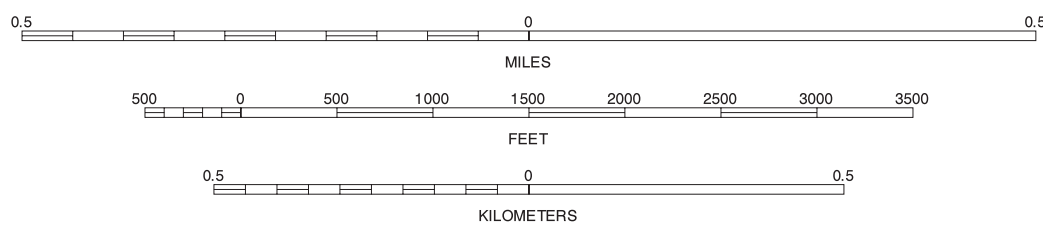
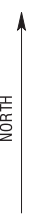


QUARTER QUADRANGLE
LOCATION



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



QUARTER QUADRANGLE
LOCATION

NEW RICHLAND NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 35 OF 49

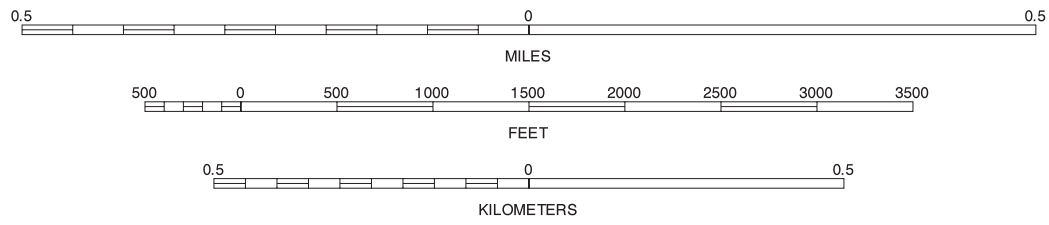
Joins sheet 29, Mapleton NE NE



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North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

NORTH



MAPLETON NE SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 36 OF 49

QUARTER QUADRANGLE
LOCATION

Joins sheet 30, Waldorf NW

R. 24 W.

93° 41' 15"



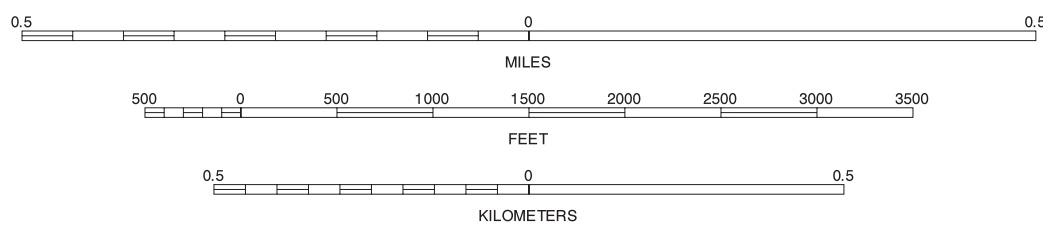
Joins sheet 36, Mapleton NE SE

Joins sheet 38, Waldorf SE

This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle realine are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

NORTH



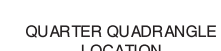
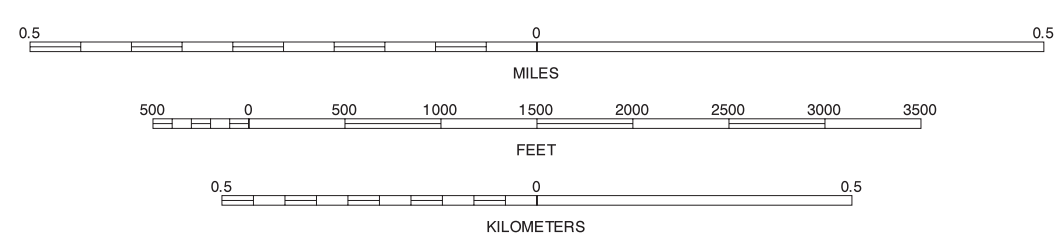
QUARTER QUADRANGLE LOCATION

WALDORF SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 37 OF 49

WASECA COUNTY, MINNESOTA
WALDORF SE QUADRANGLE
SHEET NUMBER 38 OF 49
93° 37' 30"

R. 24 W. | R. 23 W.

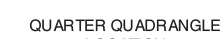
North American Datum of 1983 (NAD83). GRS-80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 15.
Coordinate grid ticks and land division data, if shown, are
approximately positioned. Soil map delineations extending
beyond the dashed white quadrangle neatline are for reference
only and are included on adjacent map sheets. Digital data
are available for this quadrangle.



WALDORF SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 38 OF 49

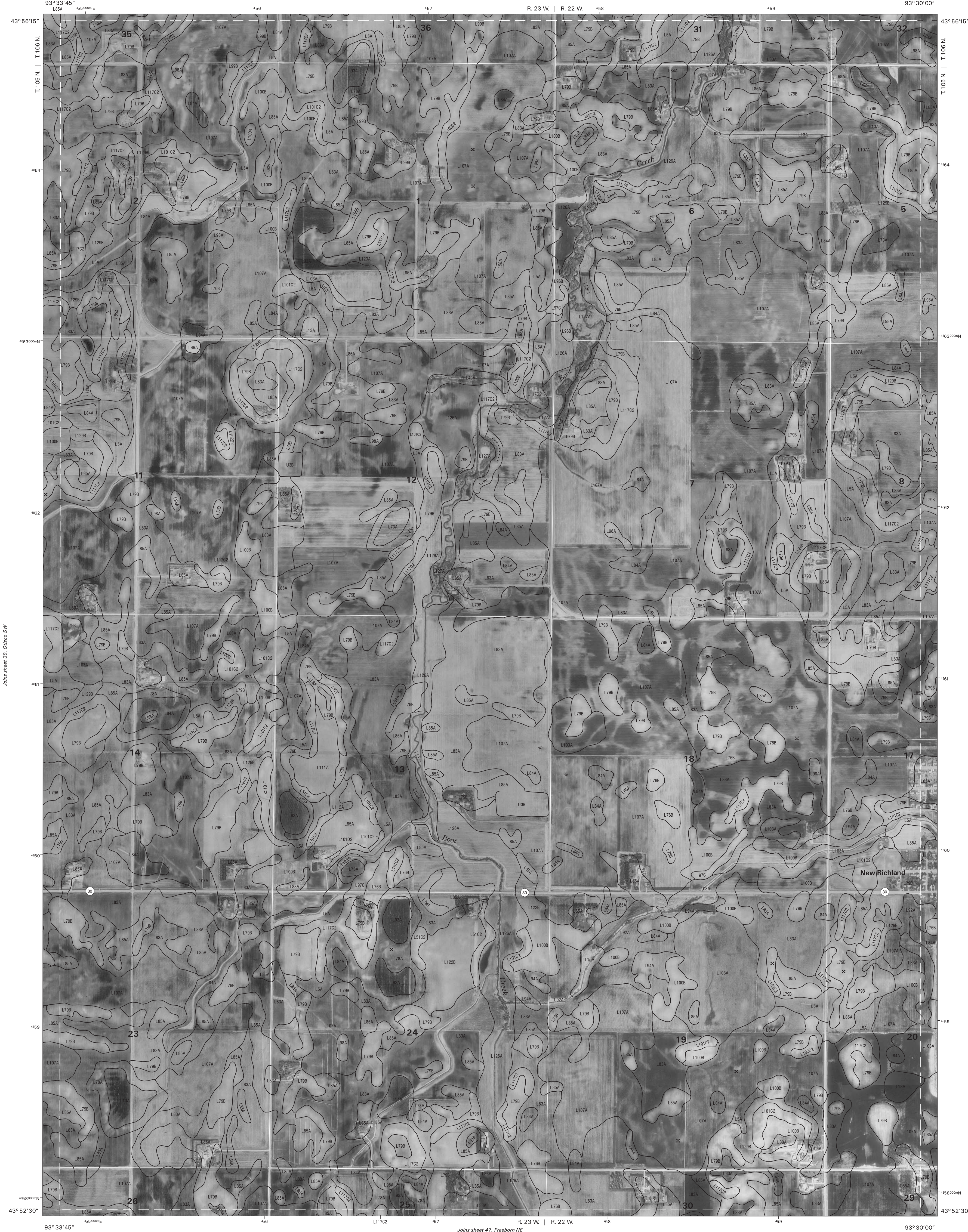
WASECA COUNTY, MINNESOTA
OTISCO SW QUADRANGLE
SHEET NUMBER 39 OF 49
93° 33' 45"

R. 23 W.



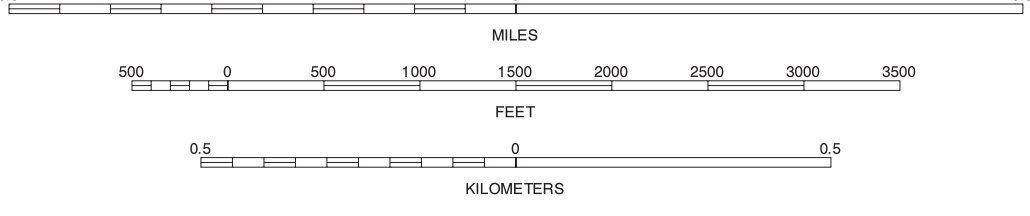
OTISCO SW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 39 OF 49

Joins sheet 33, Otisco NE



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neckline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

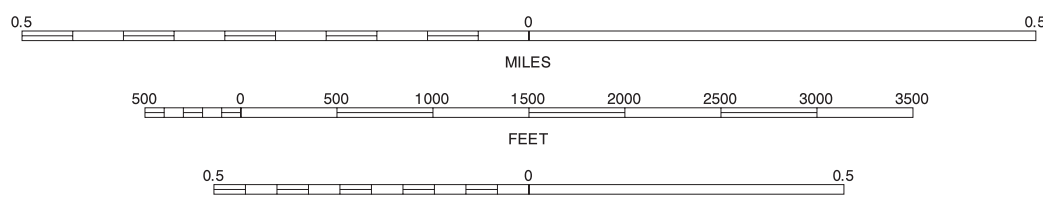


OTISCO SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 40 OF 49



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle realine are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.

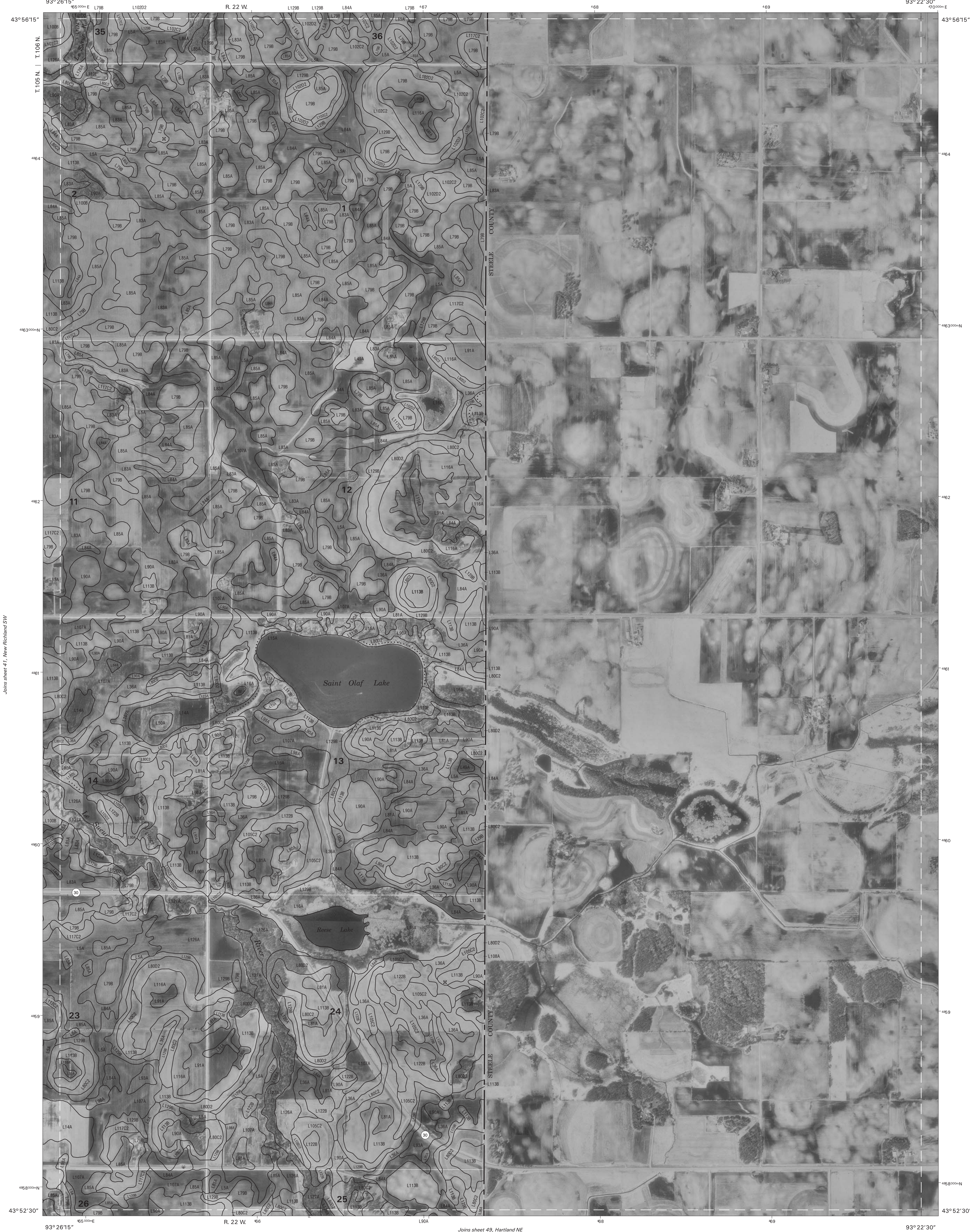


QUARTER QUADRANGLE LOCATION

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

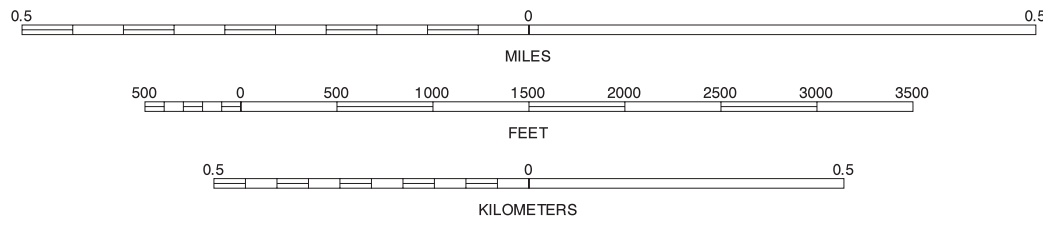
WASECA COUNTY, MINNESOTA
NEW RICHLAND SE QUADRANGLE
SHEET NUMBER 42 OF 49

Joins sheet 35, New Richland NE



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle realine are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



NEW RICHLAND SE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 42 OF 49

WASECA COUNTY, MINNESOTA
MINNESOTA LAKE NE QUADRANGLE
SHEET NUMBER 43 OF 49

R. 24 W.

QUARTER QUADRANGLE
LOCATION

MINNESOTA LAKE NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 43 OF 49

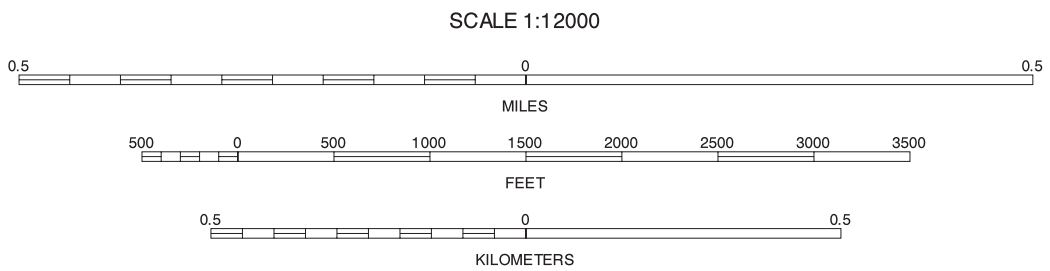
Joins sheet 37, Waldorf SW

R. 24 W.



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NORTH

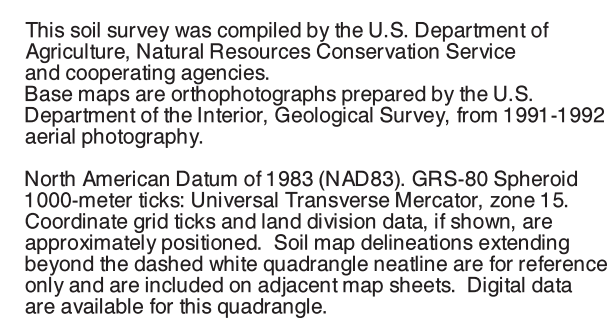


QUARTER QUADRANGLE LOCATION

MATAWAN NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 44 OF 49

WASECA COUNTY, MINNESOTA
MATAWAN NE QUADRANGLE
SHEET NUMBER 45 OF 49

R. 24 W. | R. 23 W.



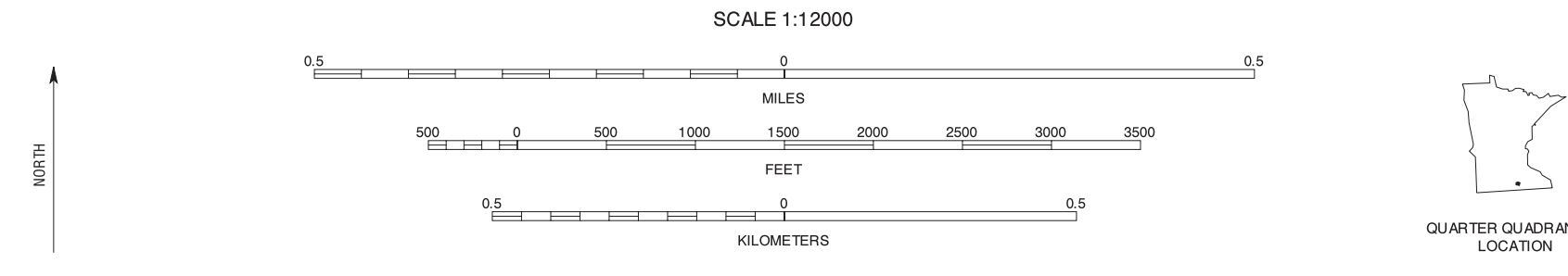
MATAWAN NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 45 OF 49

Joins sheet 39, Otisco SW



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

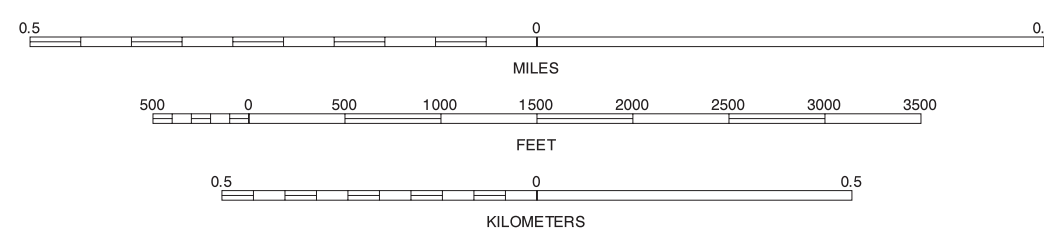
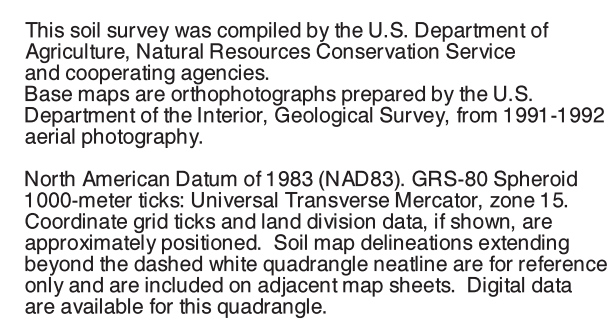
North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle realine are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



FREEBORN NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 46 OF 49

WASECA COUNTY, MINNESOTA
FREEBORN NE QUADRANGLE
SHEET NUMBER 47 OF 49
93° 30' 00"

R. 23 W. | R. 22 W.



FREEBORN NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 47 OF 49

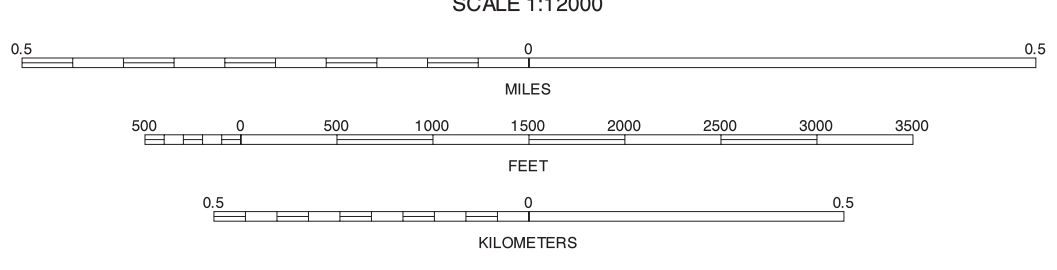
Joins sheet 41, New Richland SW

R. 22 W



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83). GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle realine are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



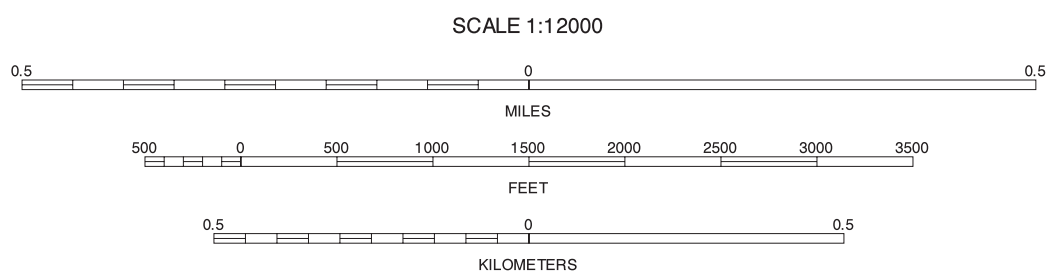
HARTLAND NW, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 48 OF 49

Joins sheet 42, New Richland SE



This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthophotographs prepared by the U.S. Department of the Interior, Geological Survey, from 1991-1992 aerial photography.

North American Datum of 1983 (NAD83), GRS-80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 15. Coordinate grid ticks and land division data, if shown, are approximately positioned. Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets. Digital data are available for this quadrangle.



HARTLAND NE, MINNESOTA
3.75 MINUTE SERIES
SHEET NUMBER 49 OF 49